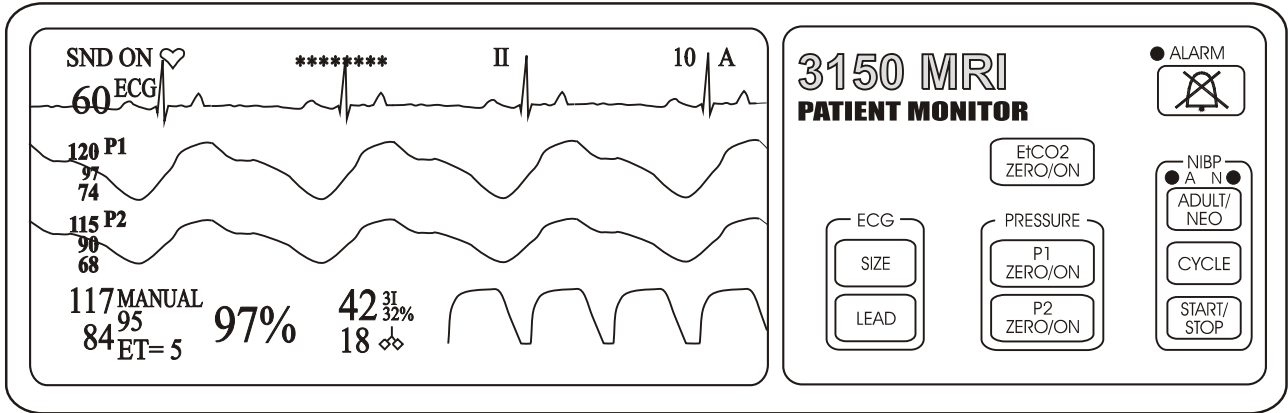


Magnitude™ 3150M MRI Monitor

Omni-Trak™ 3150 MRI Monitor



INVIVO RESEARCH, INC.
PRECISION BIOMEDICAL INSTRUMENTS



Service Manual

Volume II

Maintenance Drawings

- INDEX -
Maintenance Drawings

NOTE

The Maintenance Drawings are listed by assembly number in ascending alphanumeric sequence. (System level drawings are presented as the first five drawings in this volume.)

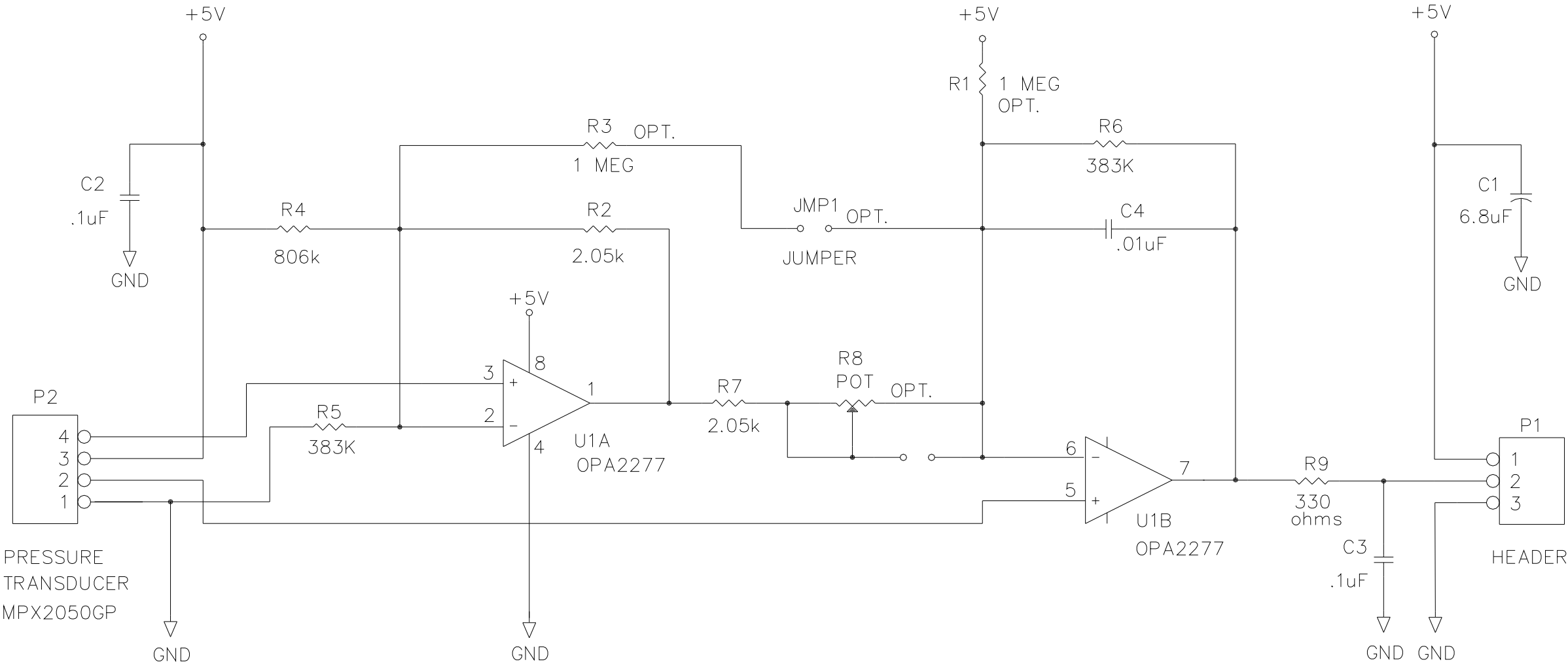
Dwg. #	Rev	Used On	Assembly # - Dwg. Title	Pg. #
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194C708	C	3150/3150M	AB75/AB75A - Assembly, PCA, Interconnect	36
C85B208	C	3150/3150M	AB75/AB75A - Schematic, PCA, Interconnect	37

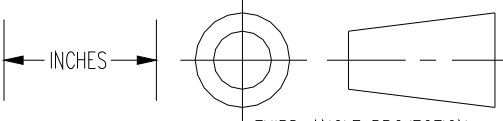
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194D659	E	AB76 Config	AB76 - Assembly, PCA, Power Supply	38
185C192	B	AB76 Config	AB76 - Schematic, PCA, Power Supply	39
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194D869	B	AB152 Config	AB152 - Assembly, PCA, Power Supply, 3150	78
185C249	B	AB152 Config	AB152 - Schematic, PCA, Power Supply, 3150	79

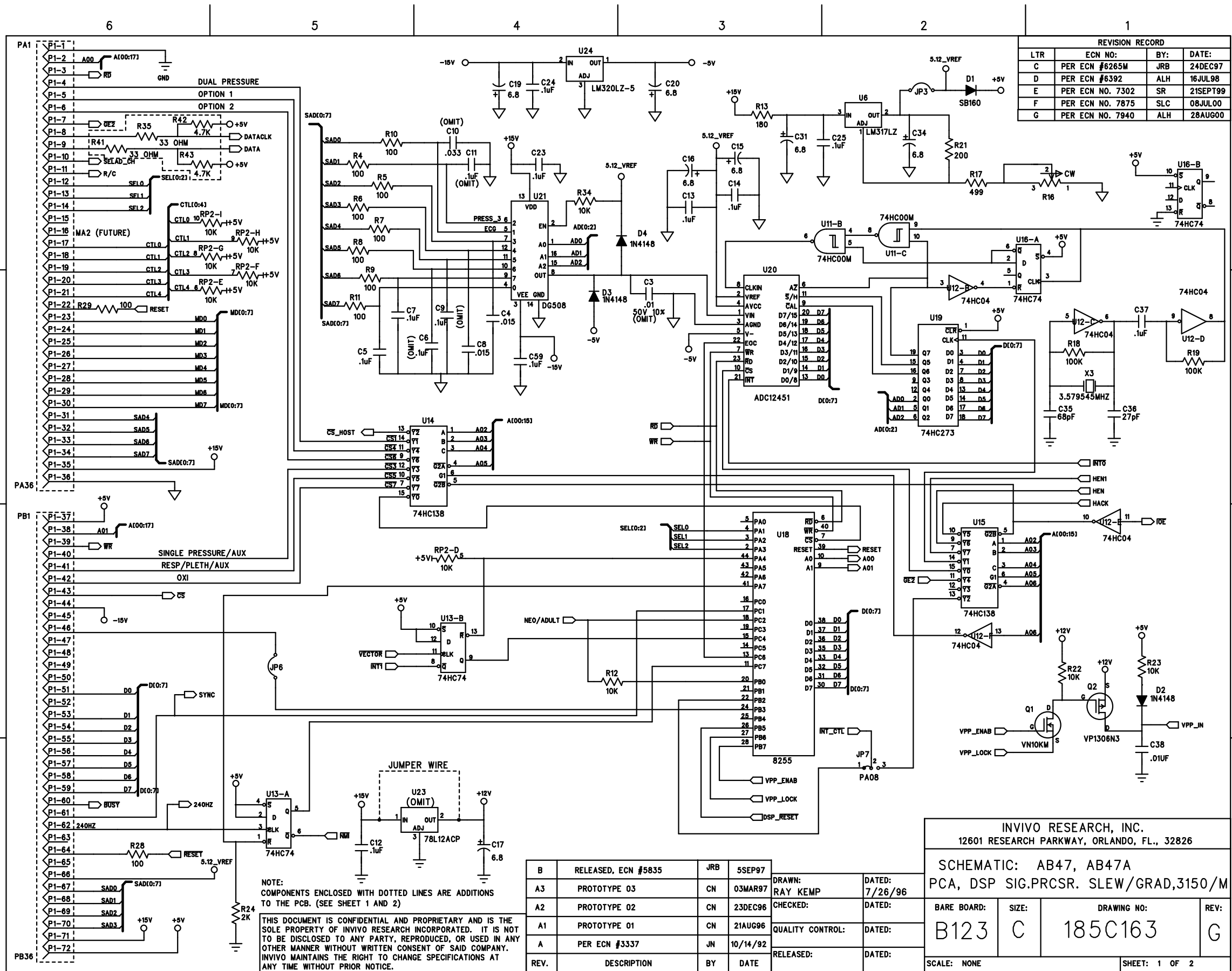
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185C252	B	3150/3150M	AB155 - Schematic, PCA, Sound Generator Module	83
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Dwg. #	Rev	Used On	Assembly # - Dwg. Title	Pg. #
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C59C346	C	3150/3150M	AC356 - Assembly, Cable, MRI Gating Output	112
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C94C865	B	3150/3150M	AS170 - Assembly, Speaker Harness, 3150	144



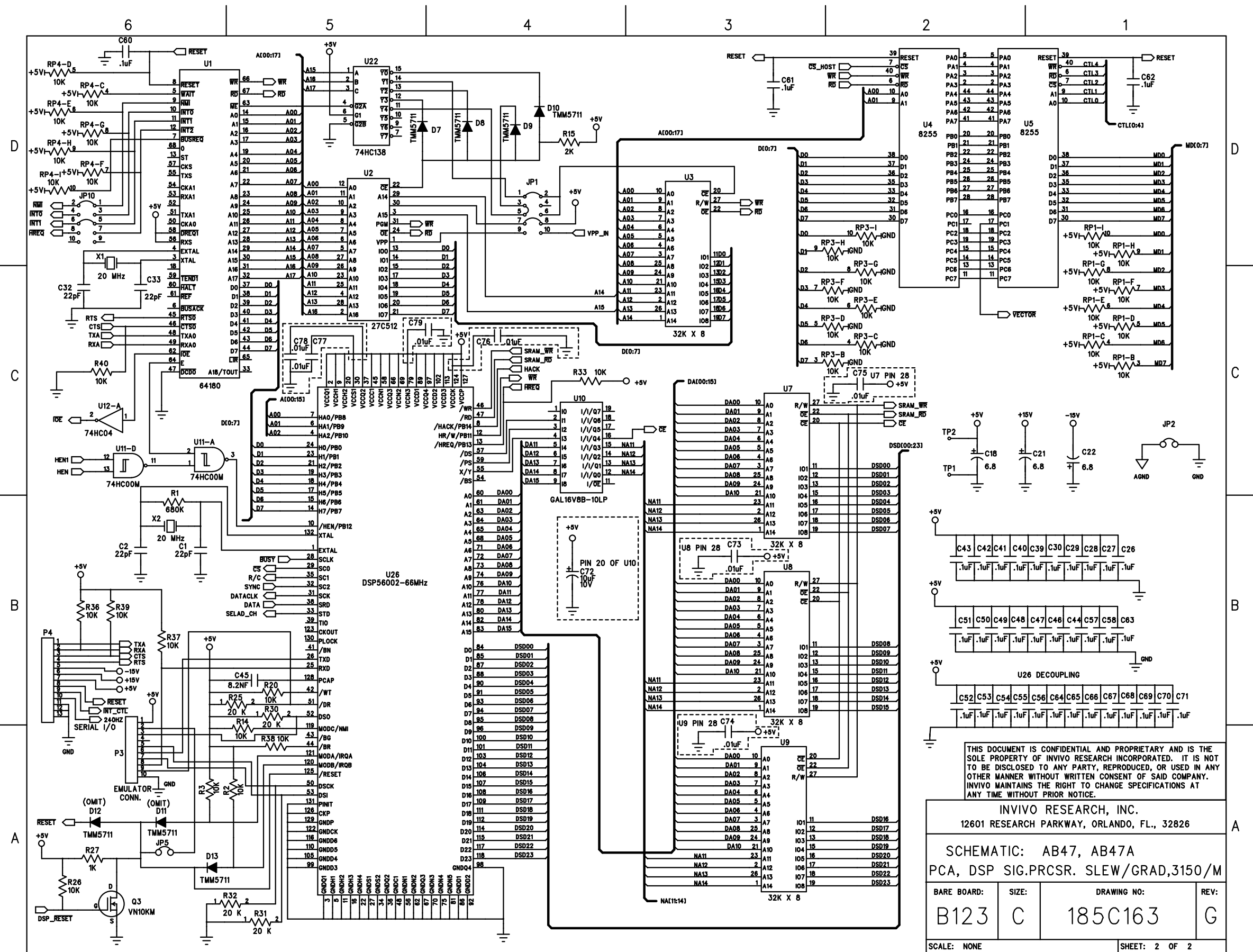
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					DESIGNED	RS	7/91		
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A	PER ECN #3085	SR	JAN92		APPROVED				
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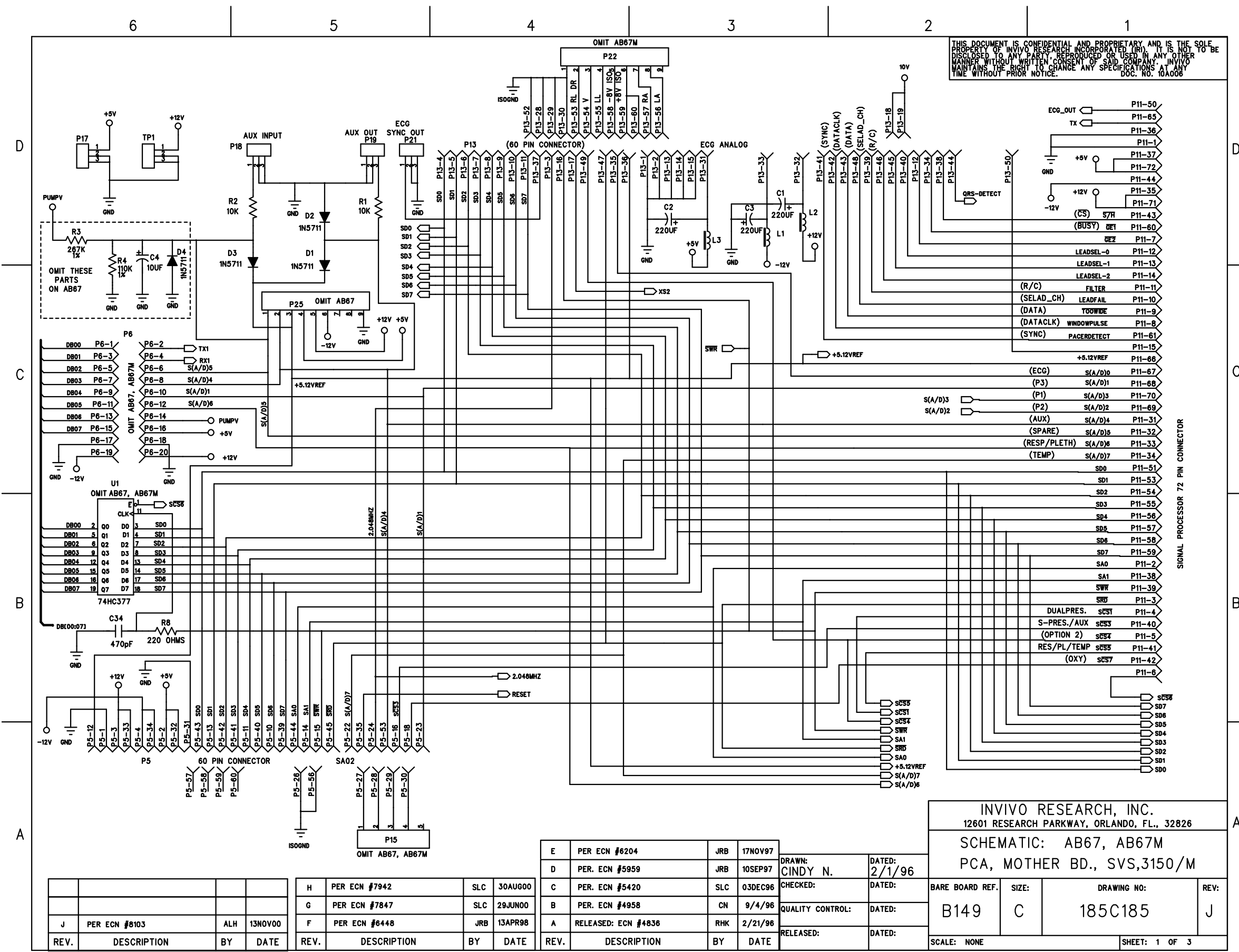


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E	PER ECN NO. 7302	SR	21SEPT99
F	PER ECN NO. 7875	SLC	08JUL00
G	PER ECN NO. 7940	ALH	28AUG00

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REV.	DESCRIPTION	BY	DATE				





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12601 RESEARCH PARKWAY, ORLANDO, FL., 32826

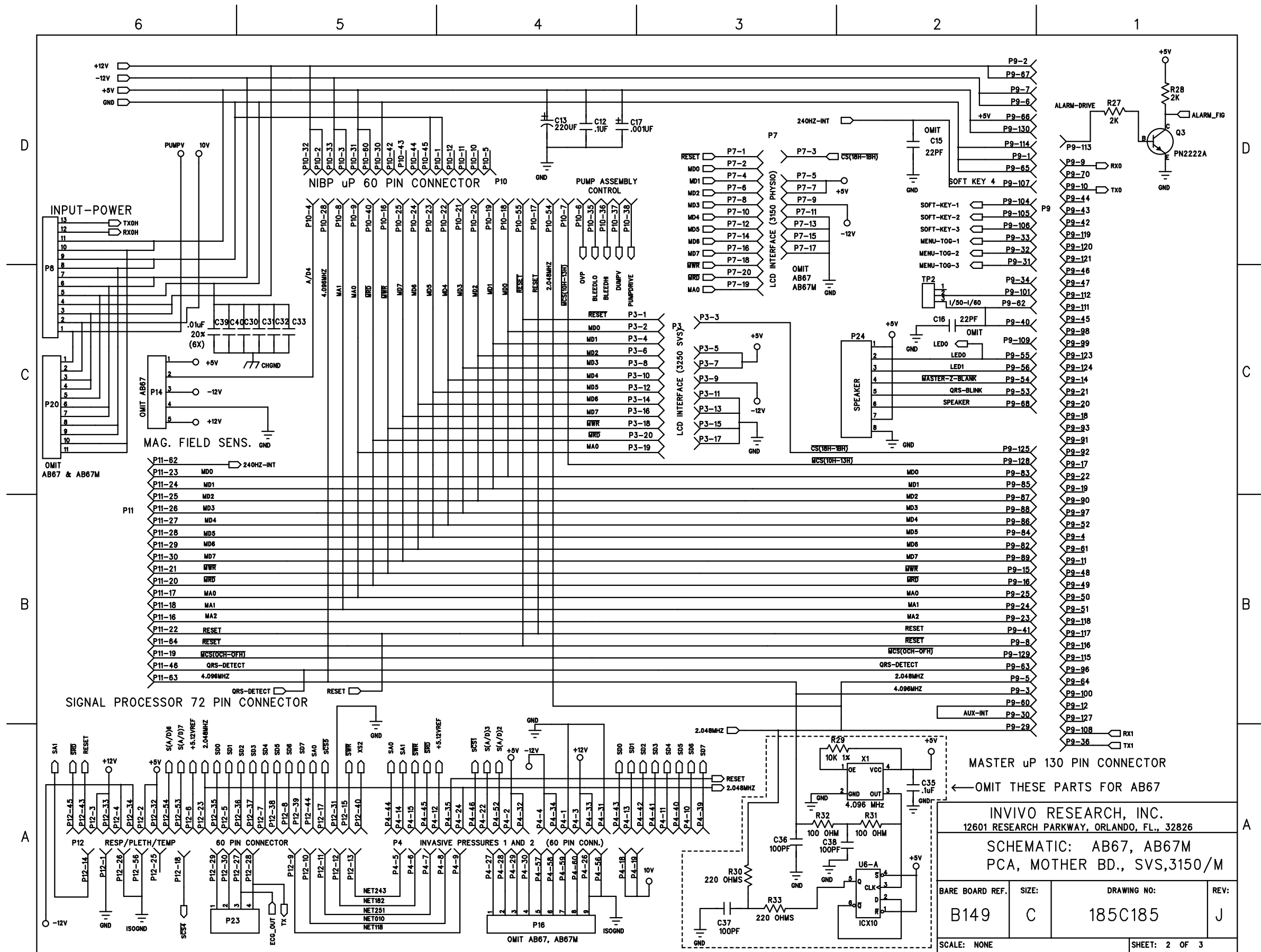
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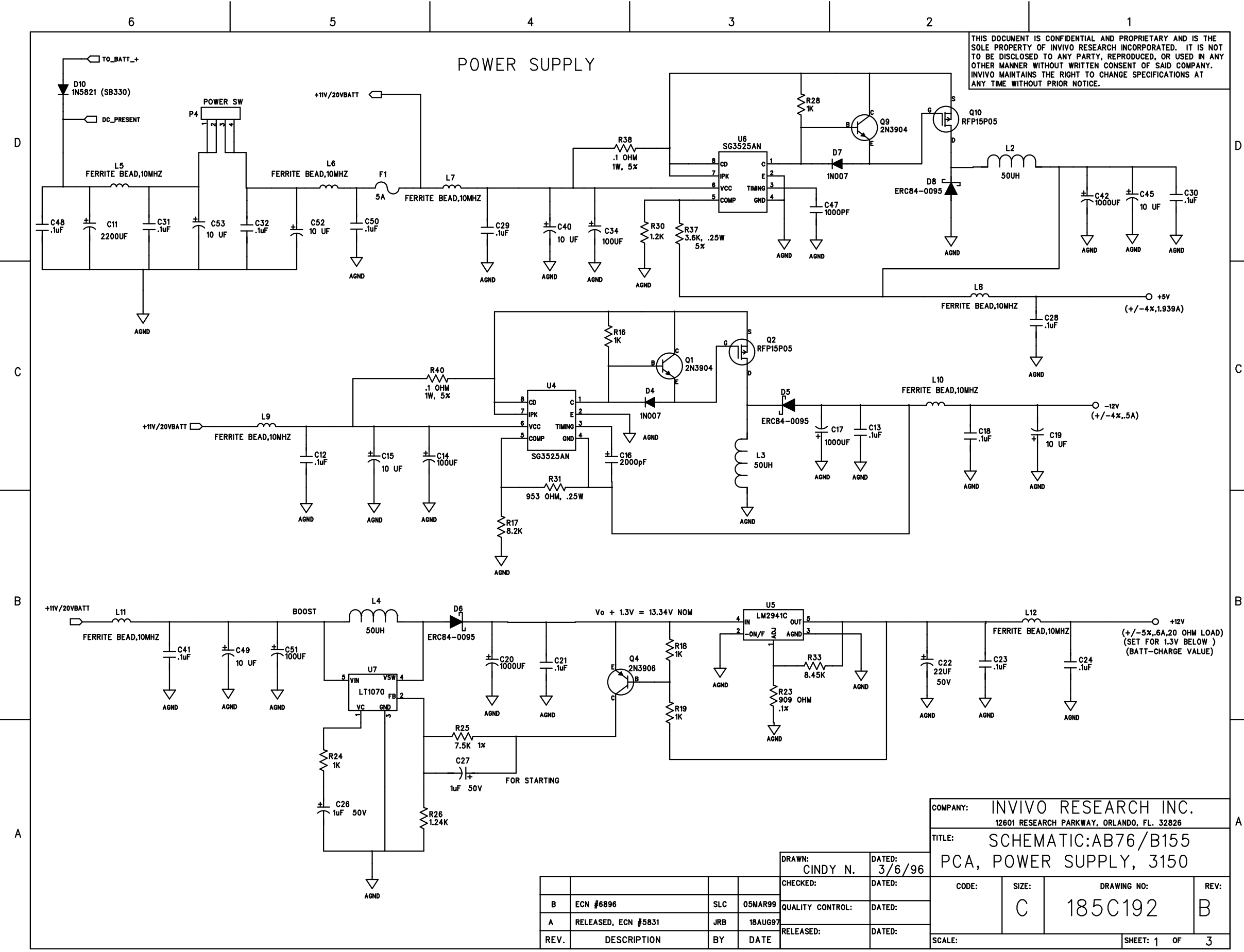
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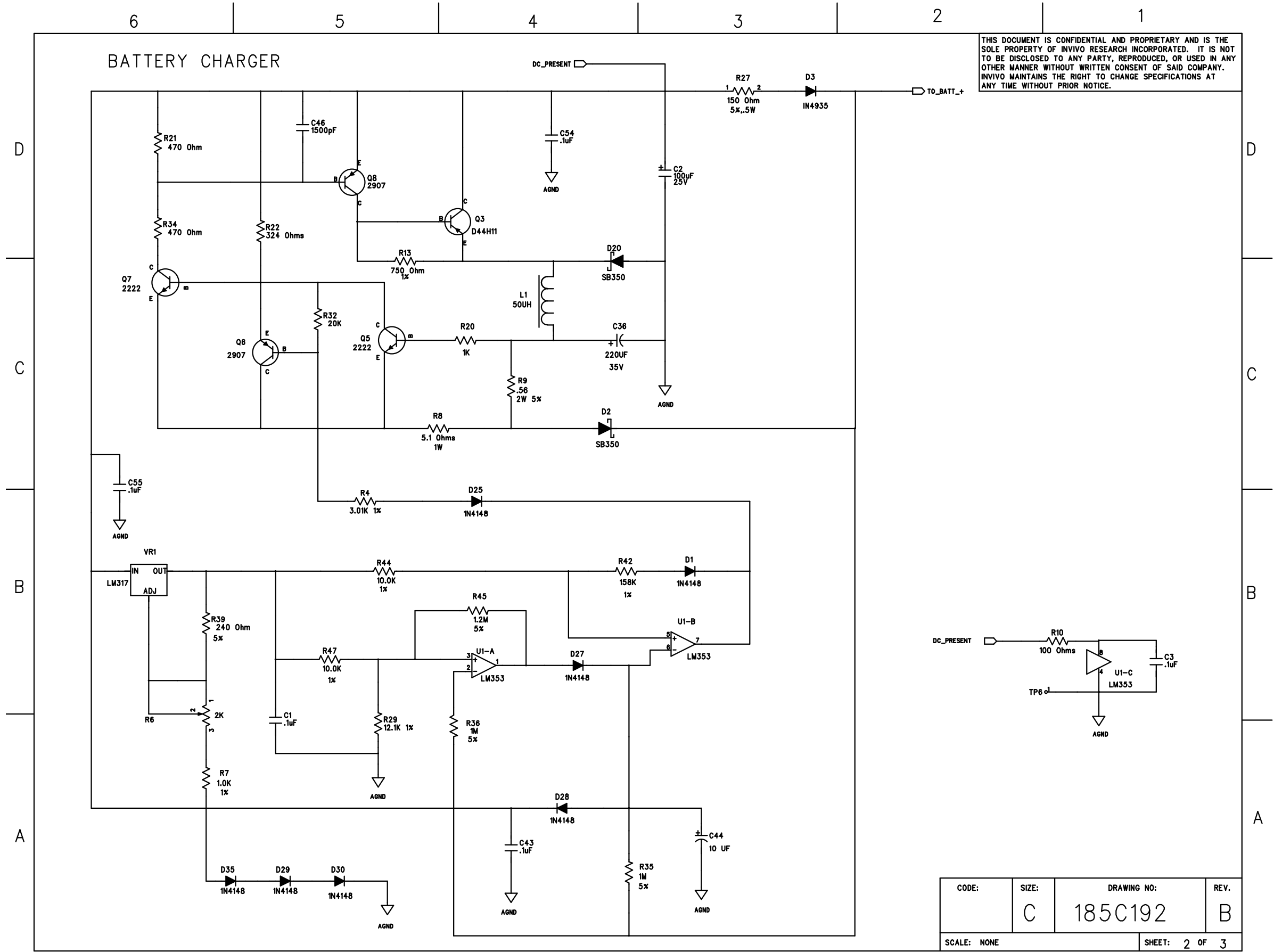
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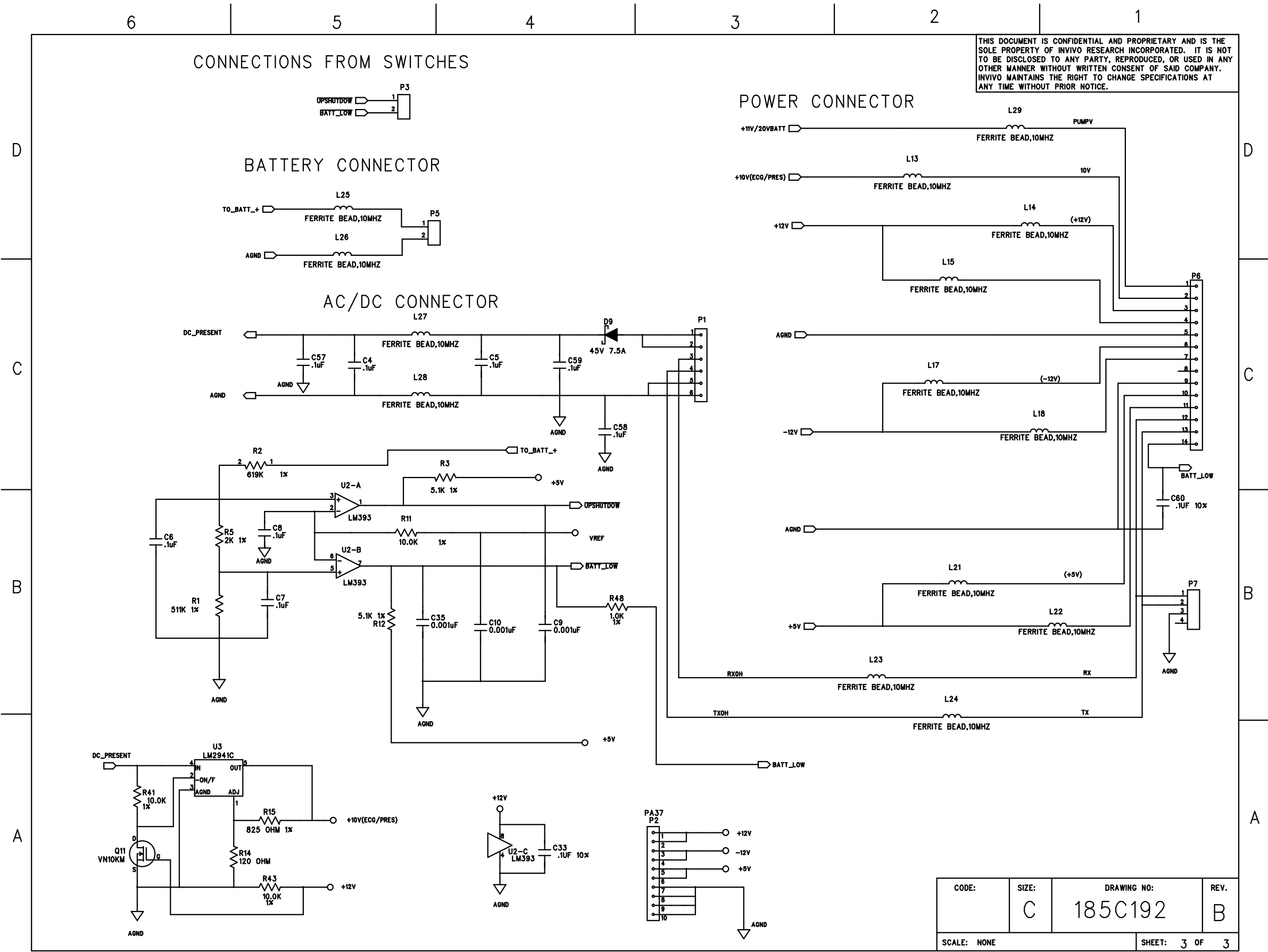
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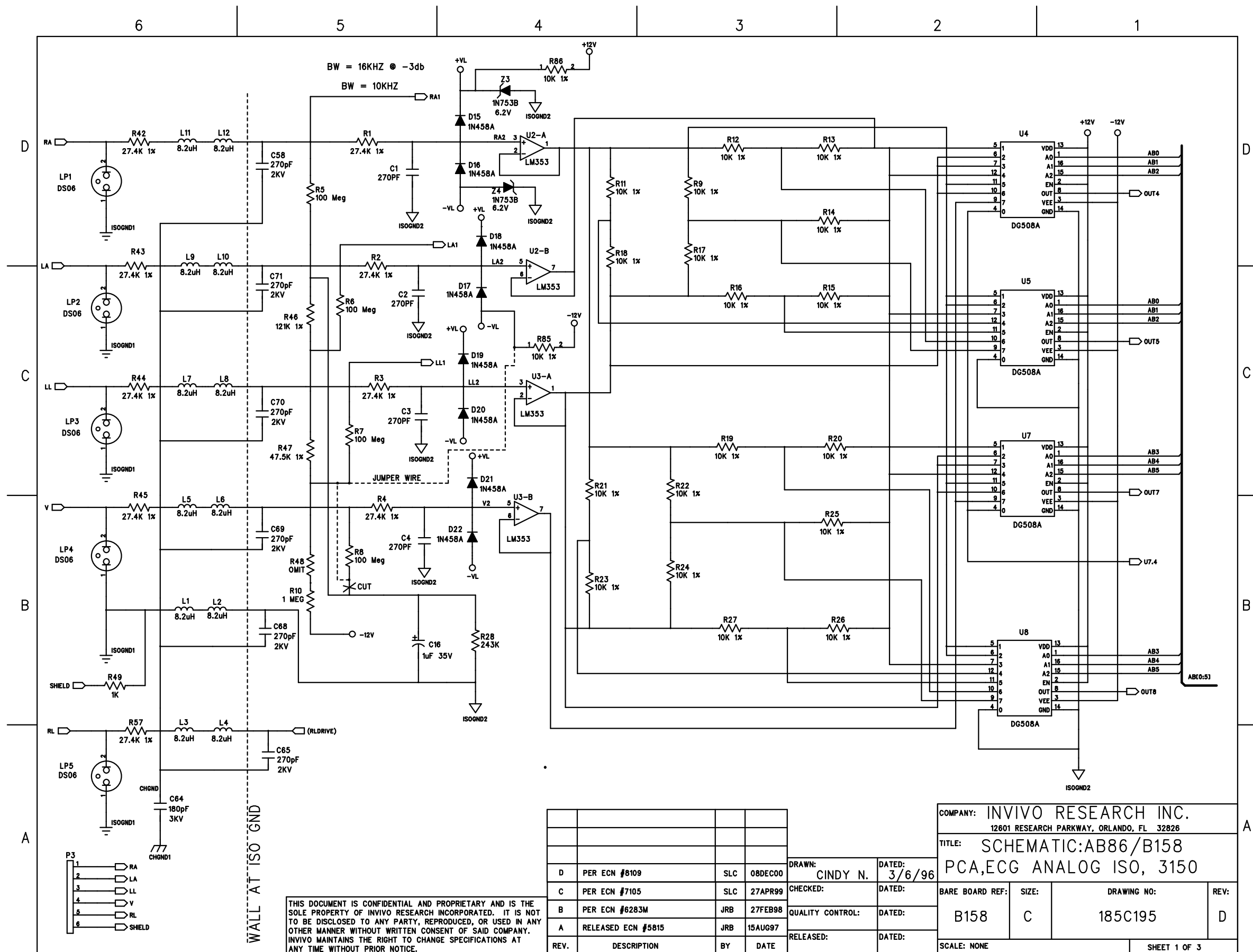


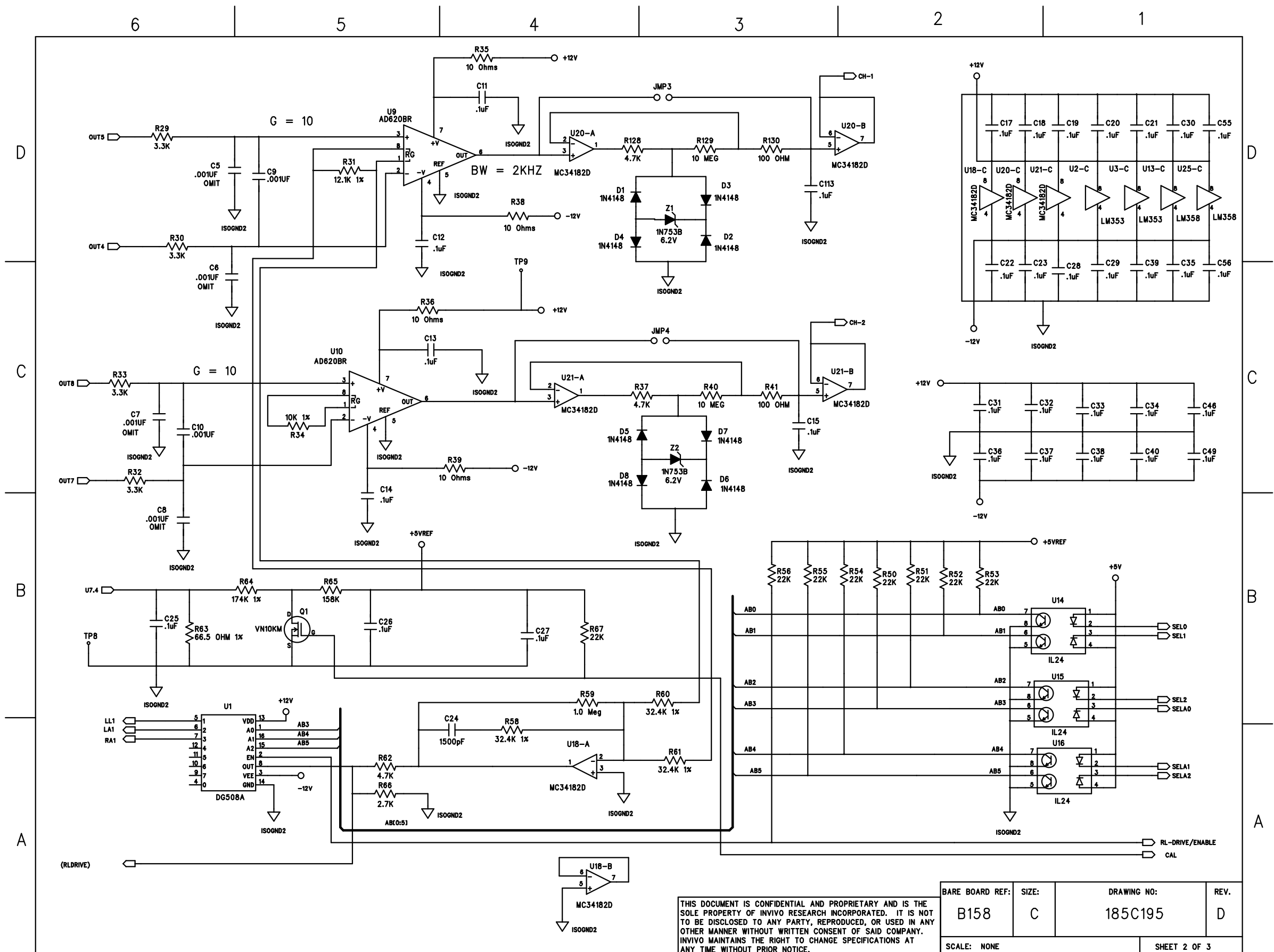






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SERVO GAIN = 36 TO 110 uA @ 10 mA If

(.855 --> 1.304)
G = 1

ISO BARRIER

D

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B

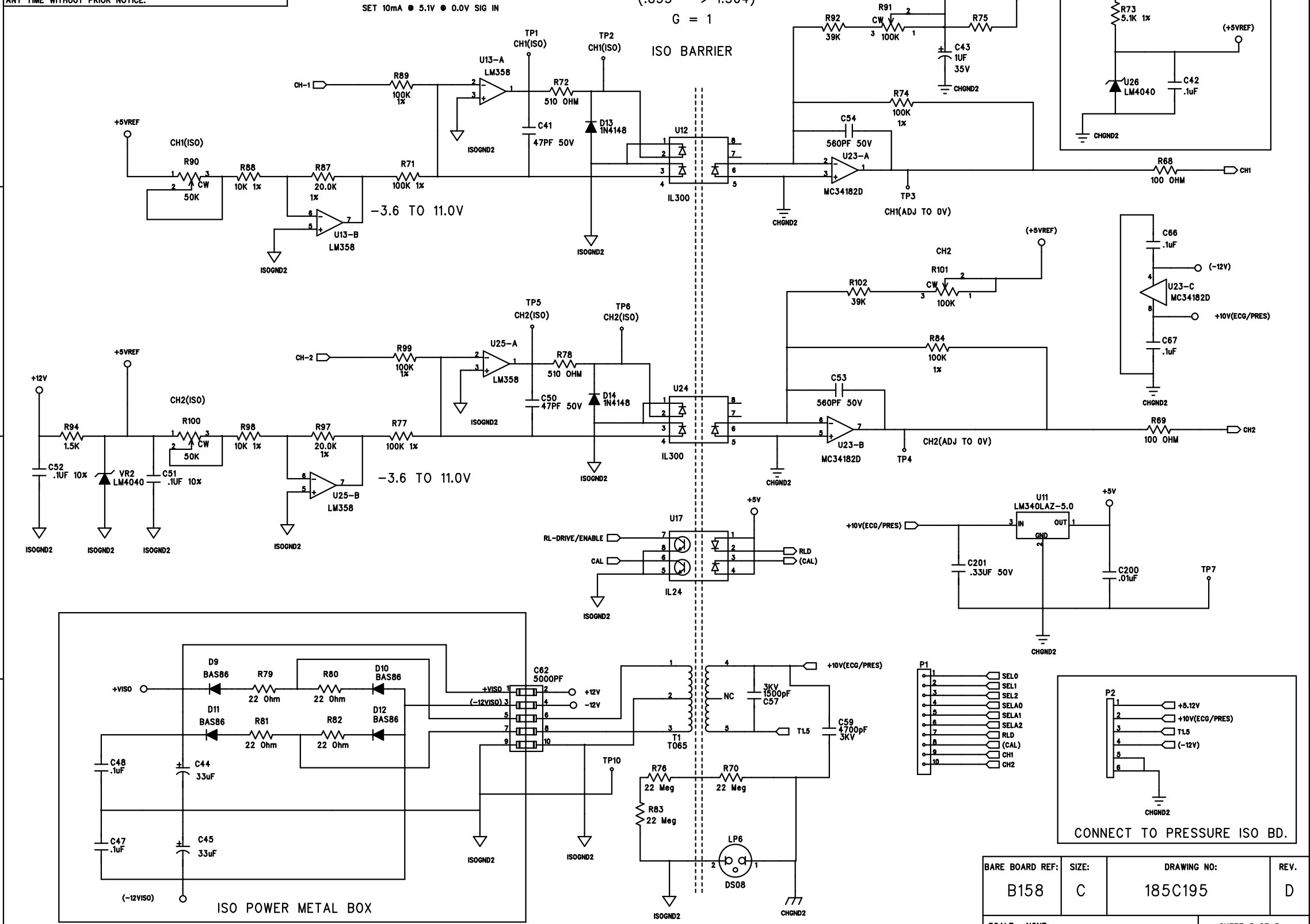
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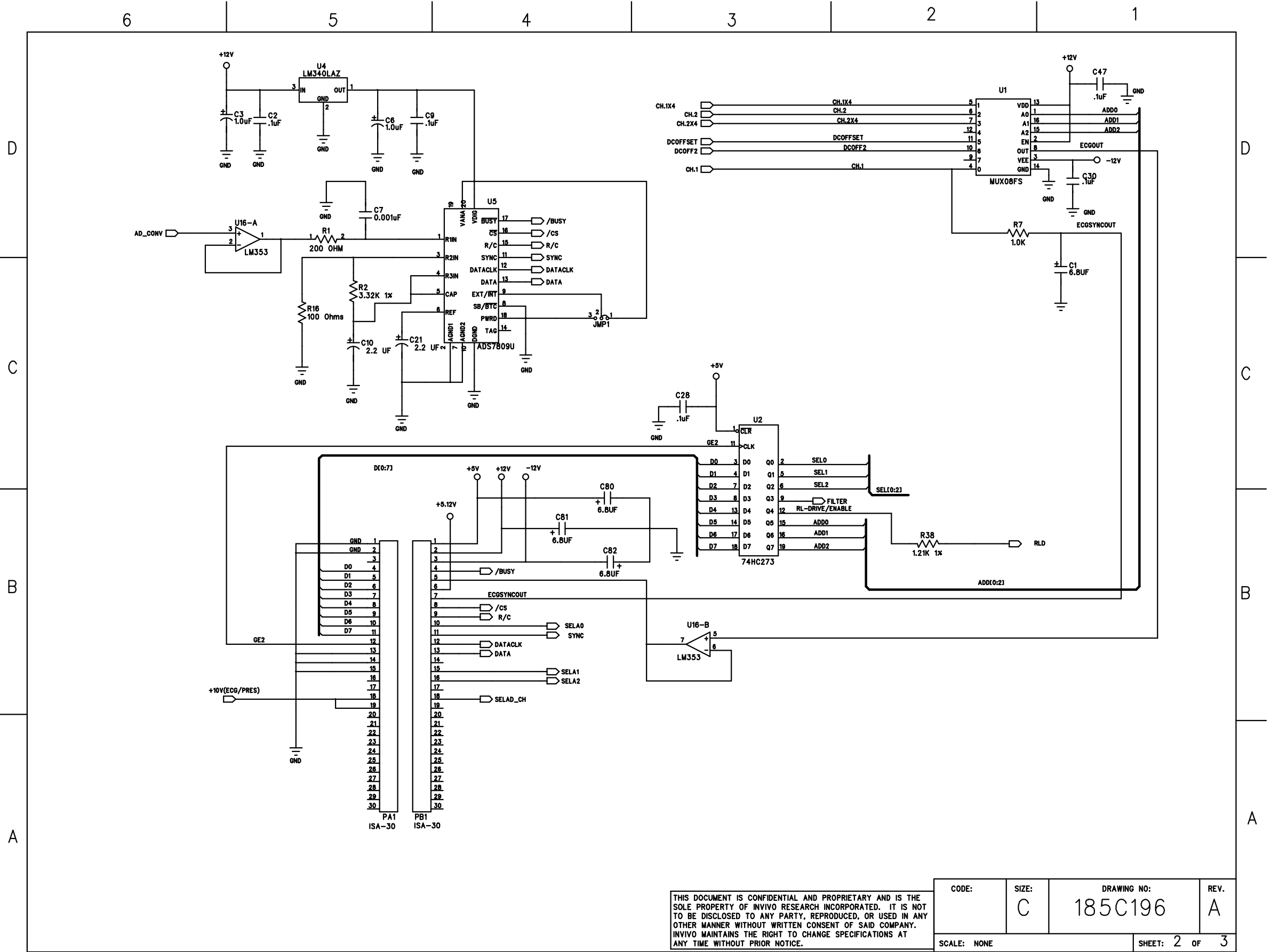
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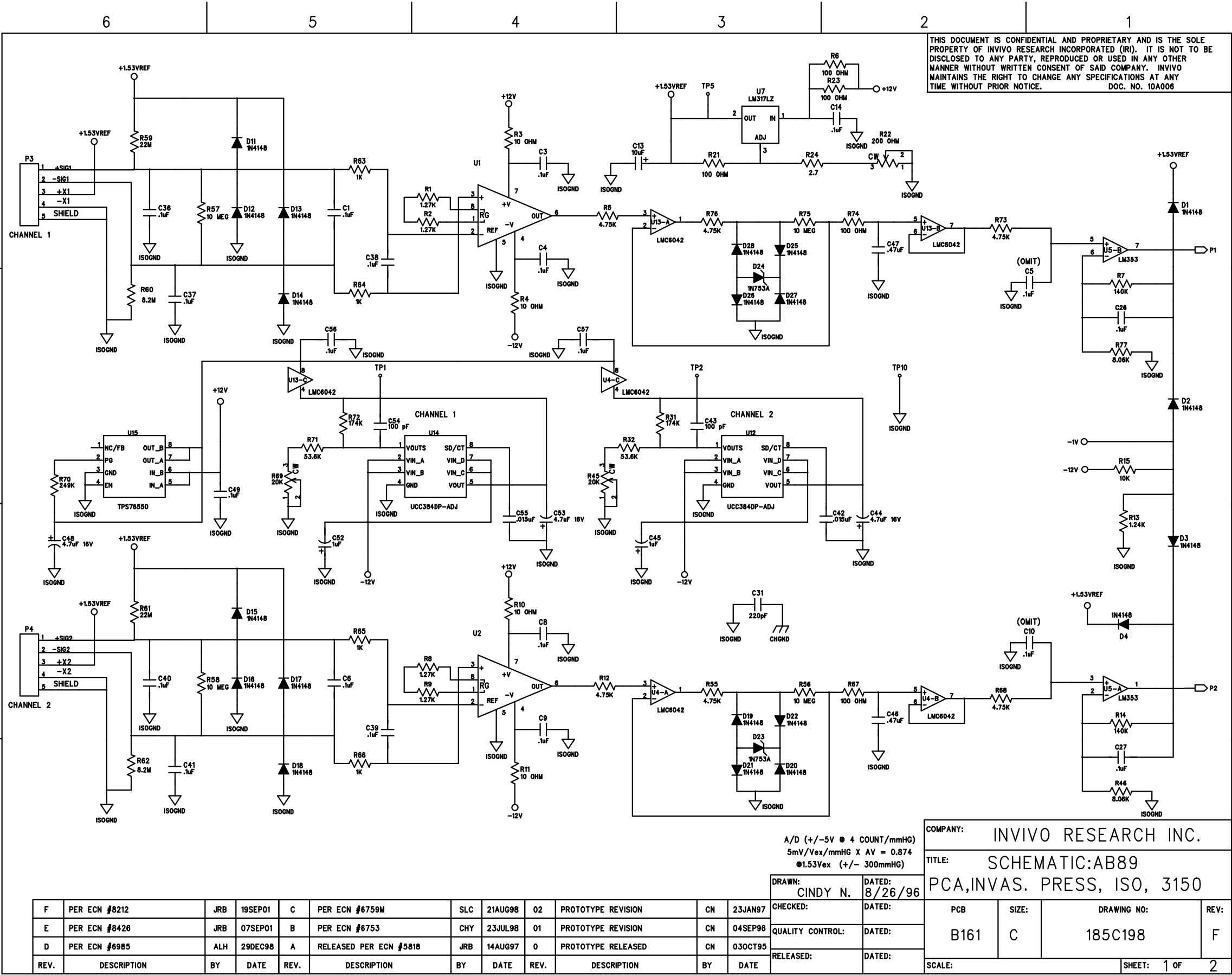


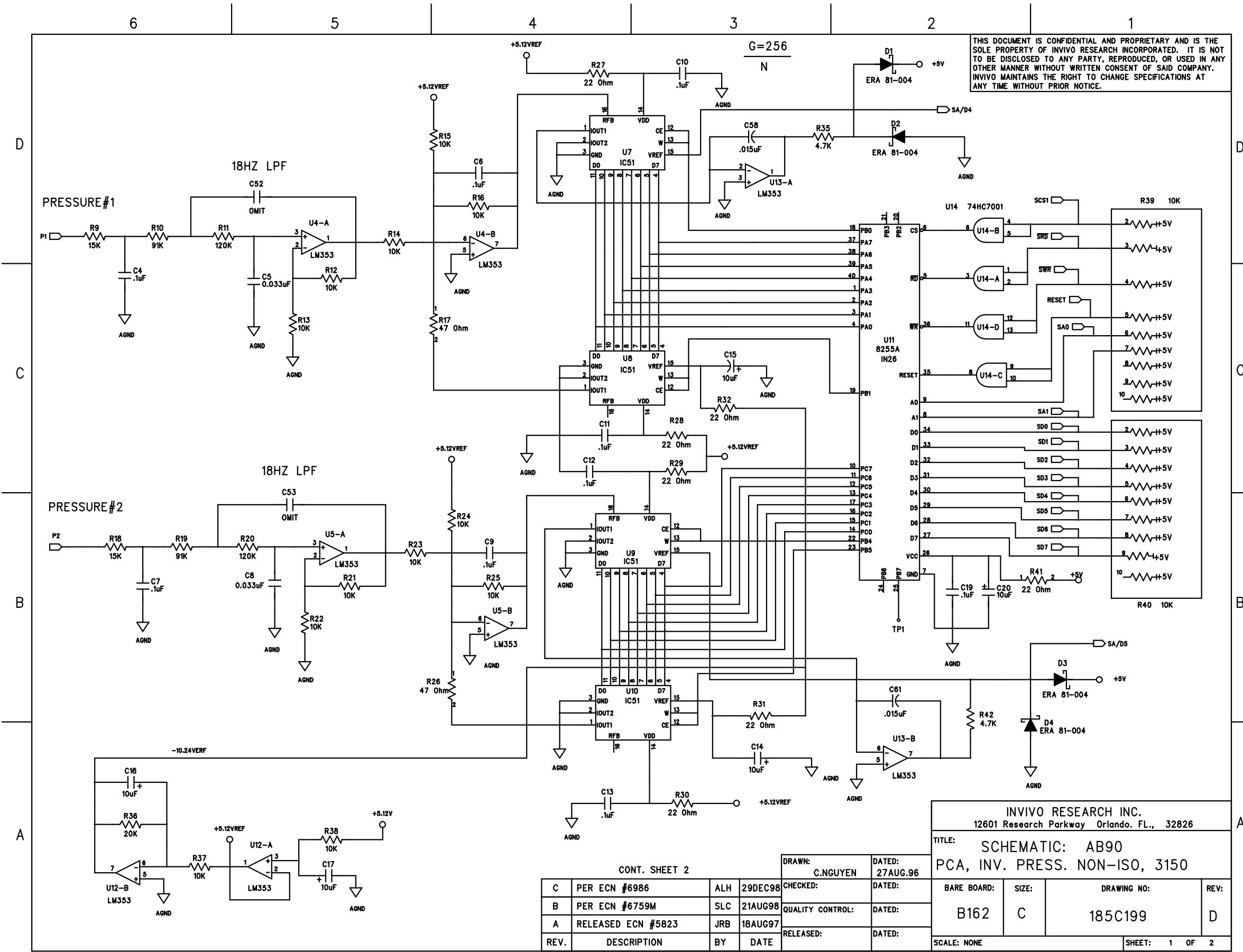
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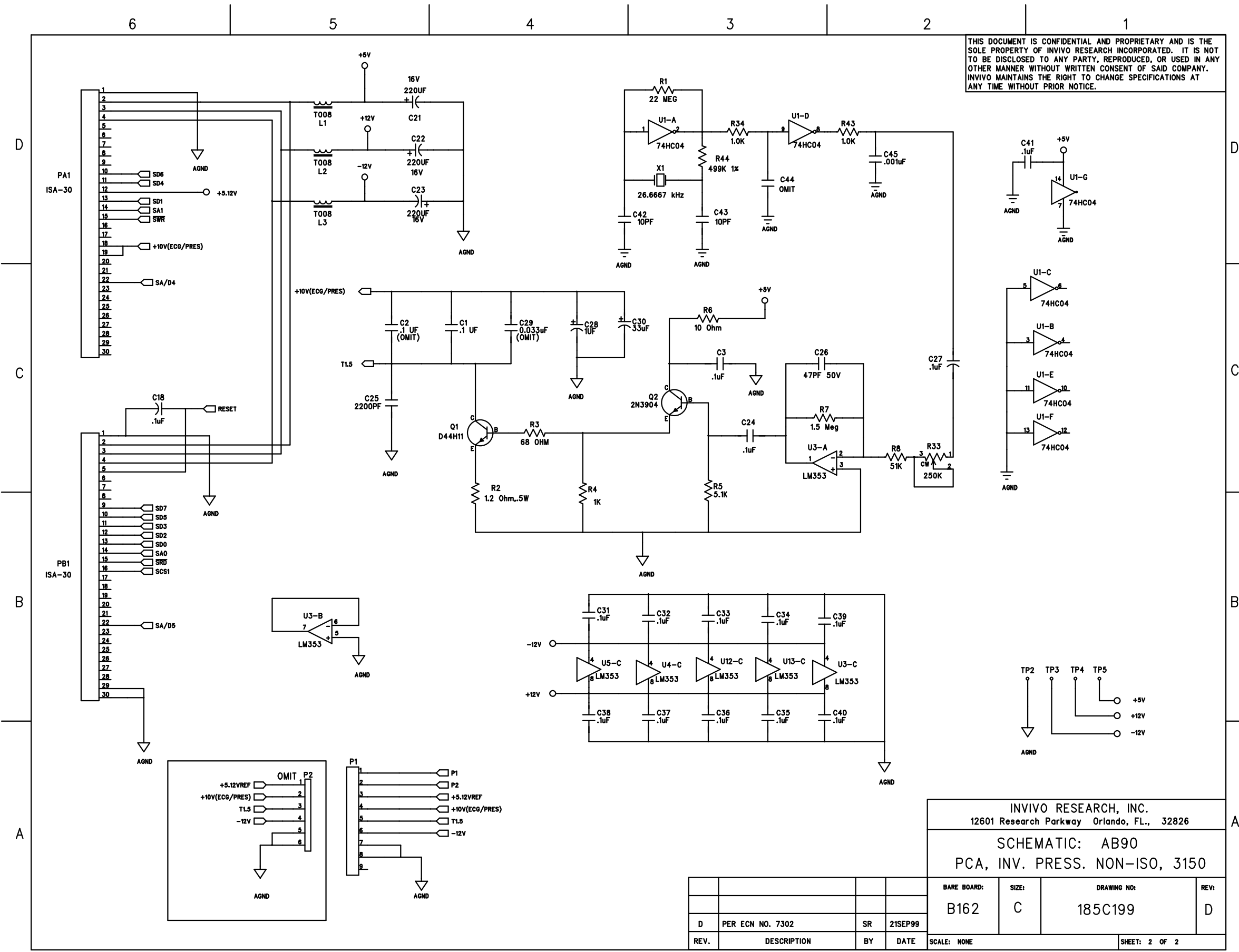


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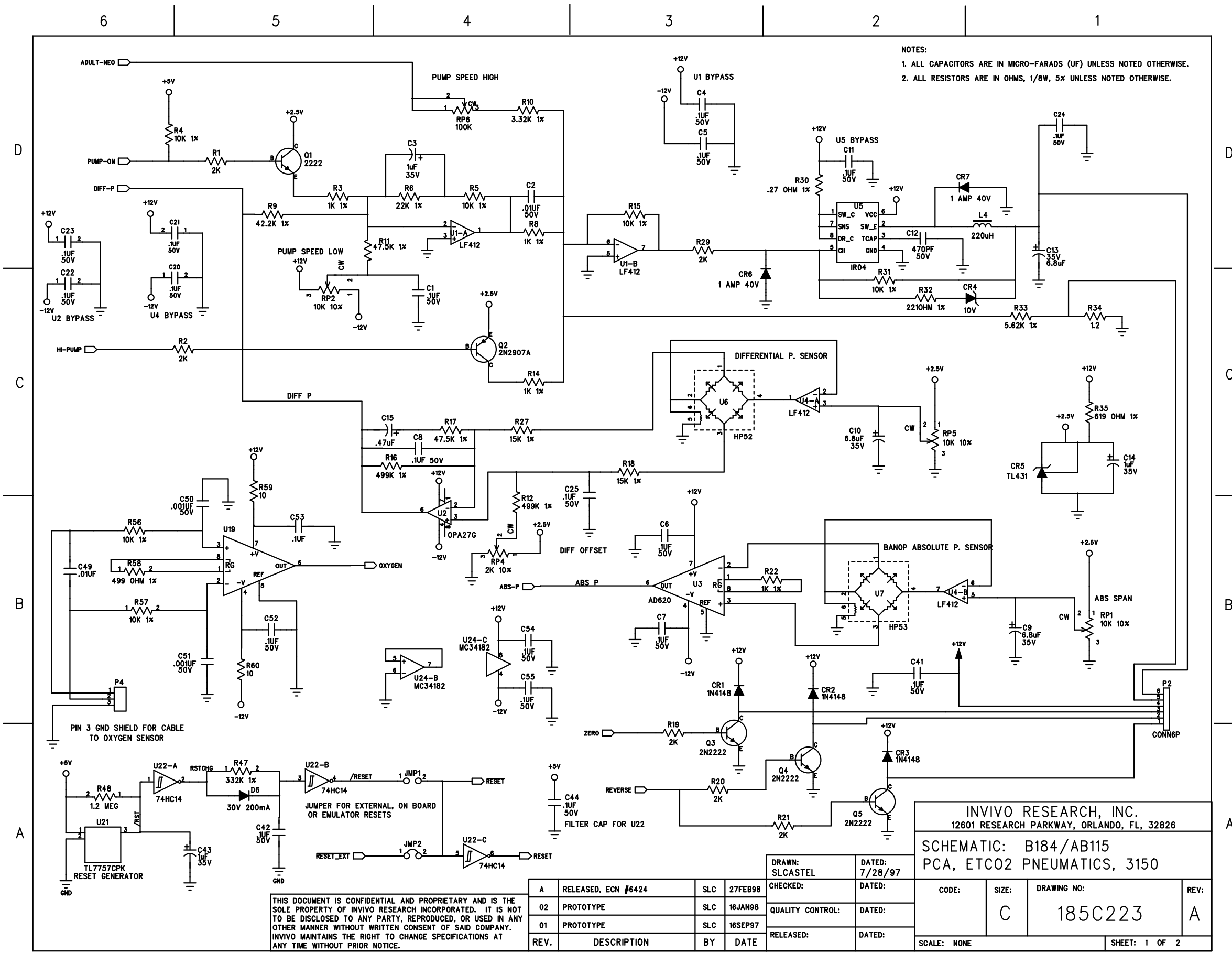




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SCHEMATIC: AB90 PCA, INV. PRESS. NON-ISO, 3150			
BARE BOARD:	SIZE:	DRAWING NO:	REV:
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REV.	PER ECH NO. 7302	SR	21SEP99
	DESCRIPTION	BY	DATE



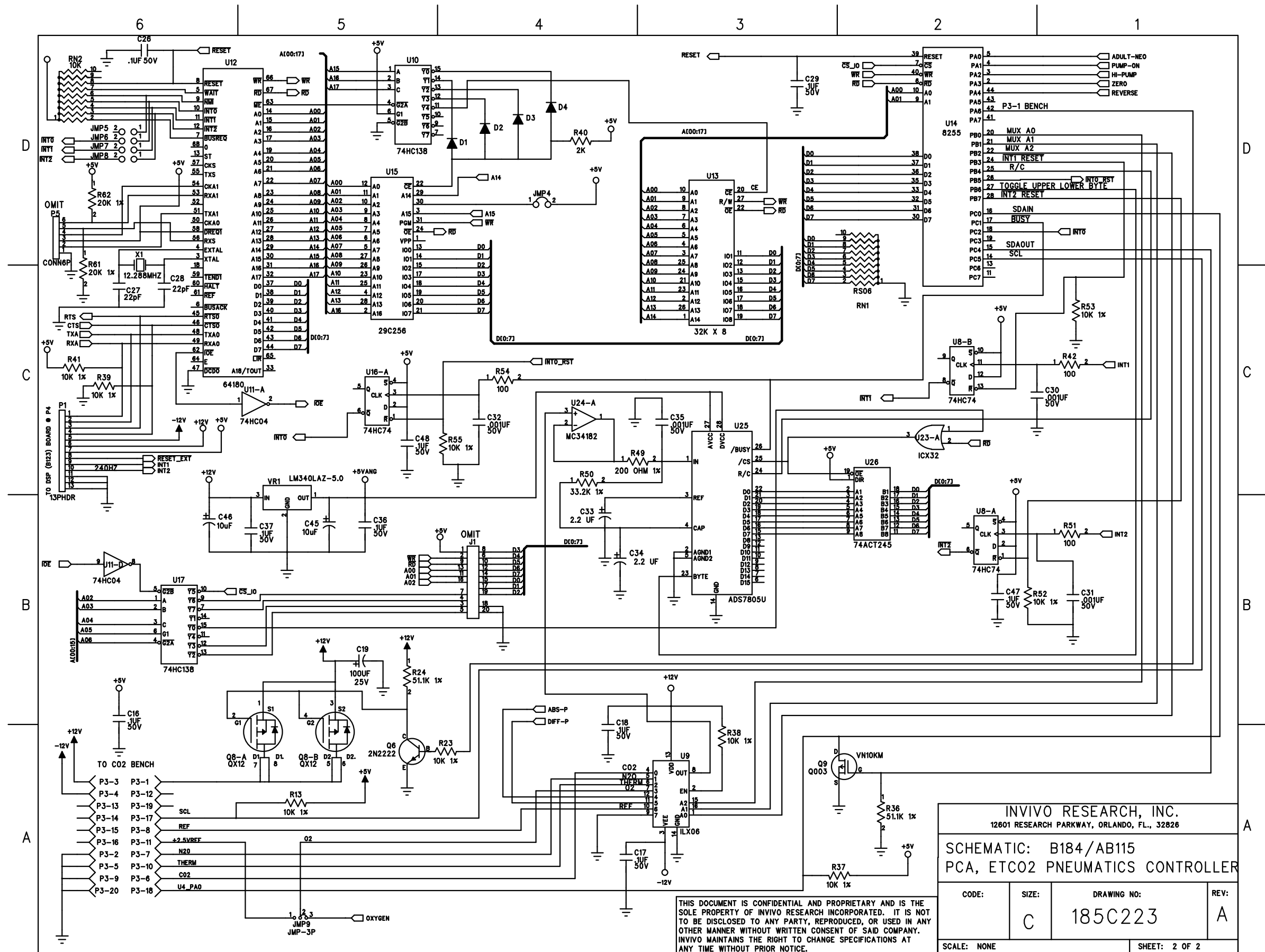
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2. ALL RESISTORS ARE IN OHMS, 1/8W, 5% UNLESS NOTED OTHERWISE.

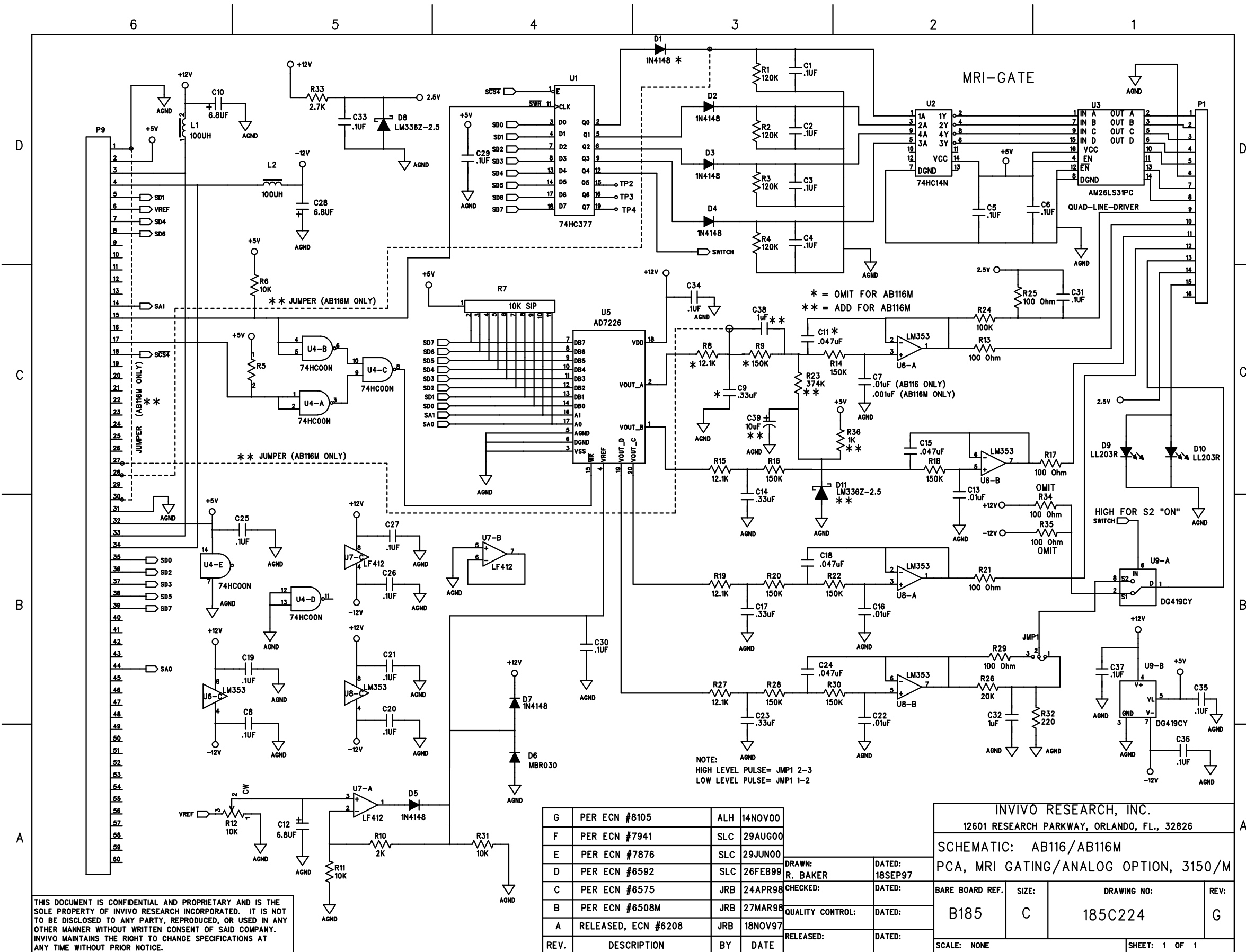
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01	PROTOTYPE	SLC	16SEP97
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CHECKED:	DATED:
QUALITY CONTROL:	DATED:
RELEASED:	DATED:

INVIVO RESEARCH, INC. 12601 RESEARCH PARKWAY, ORLANDO, FL, 32826			
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SCALE: NONE		SHEET: 1 OF 2	



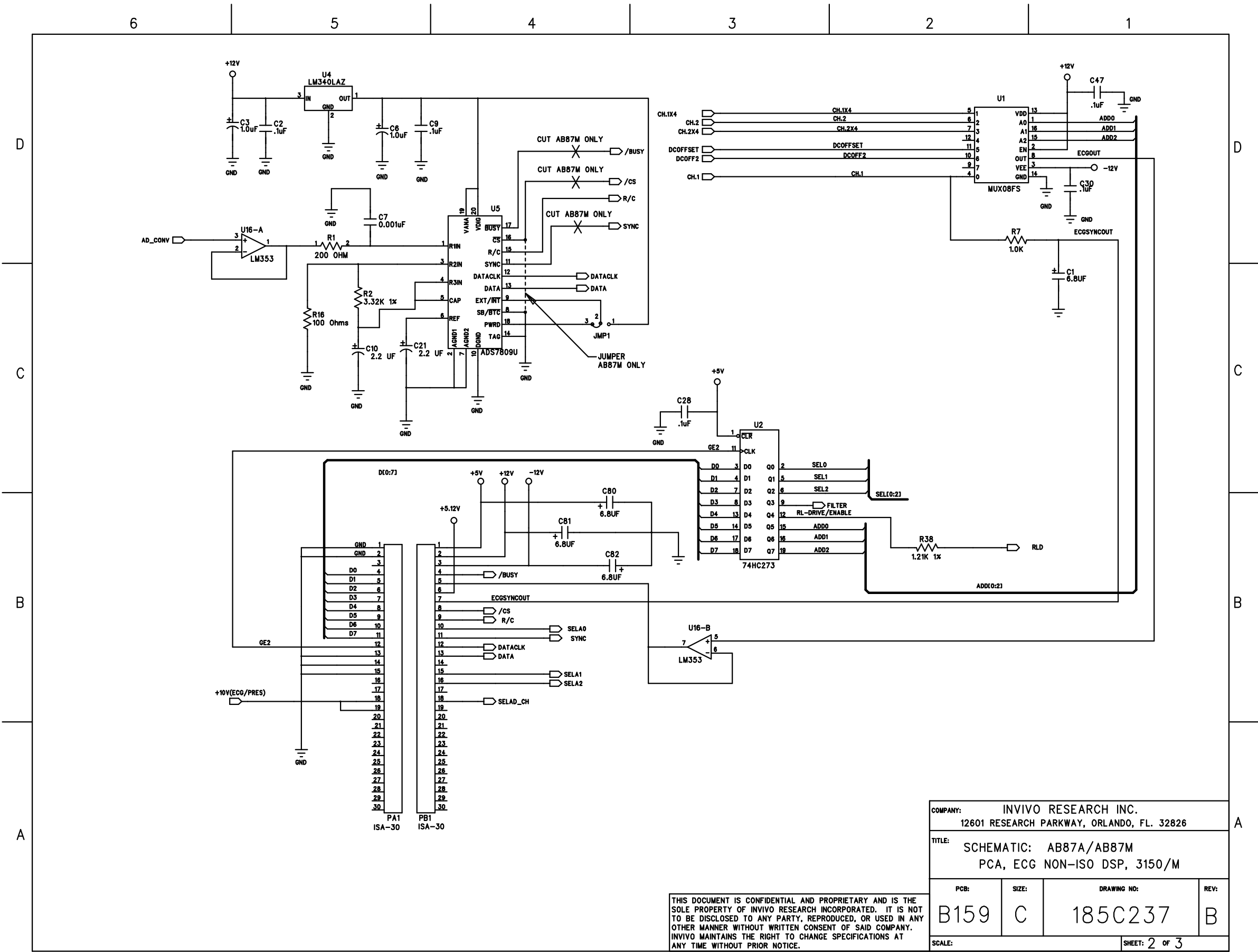


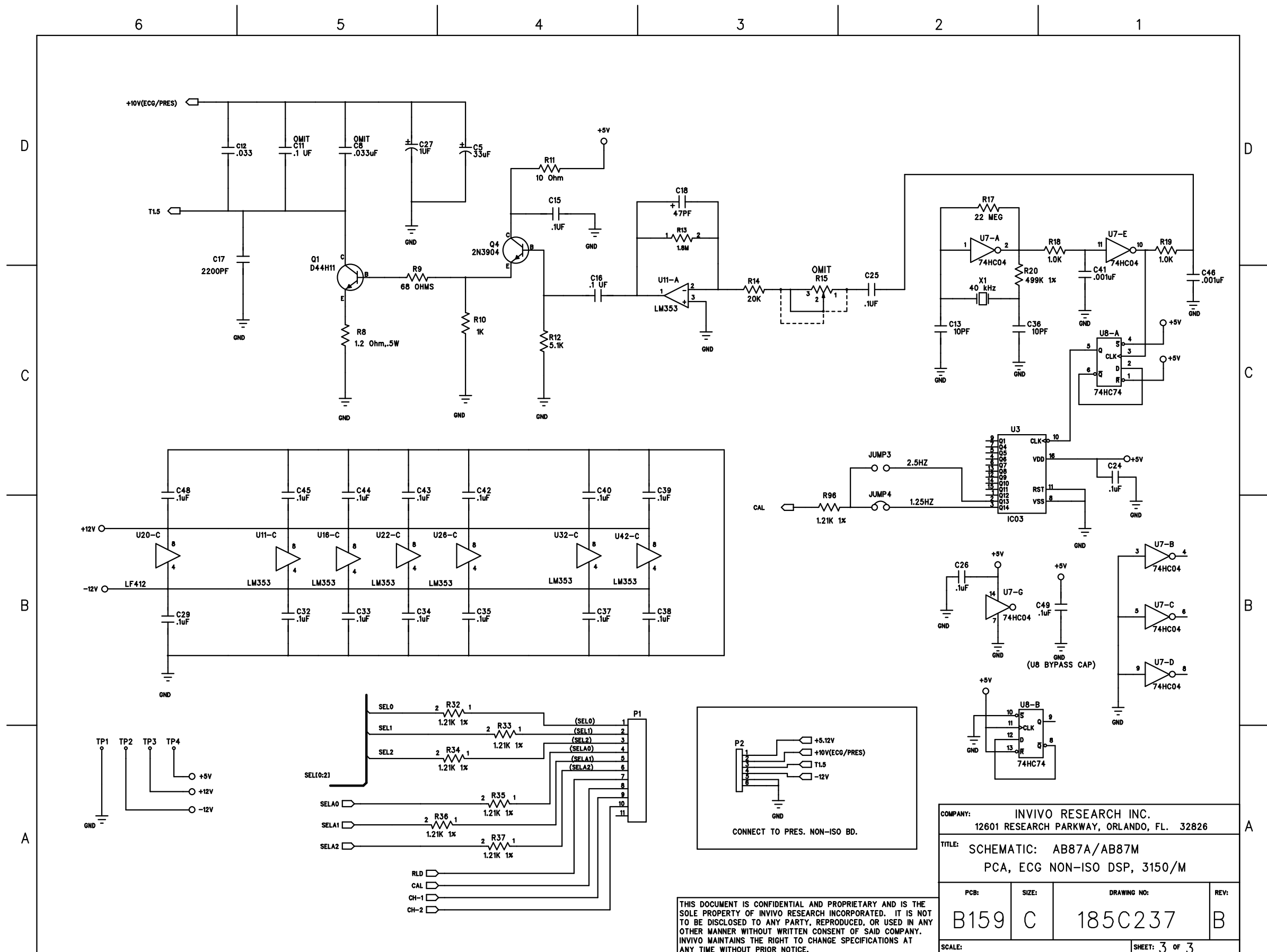
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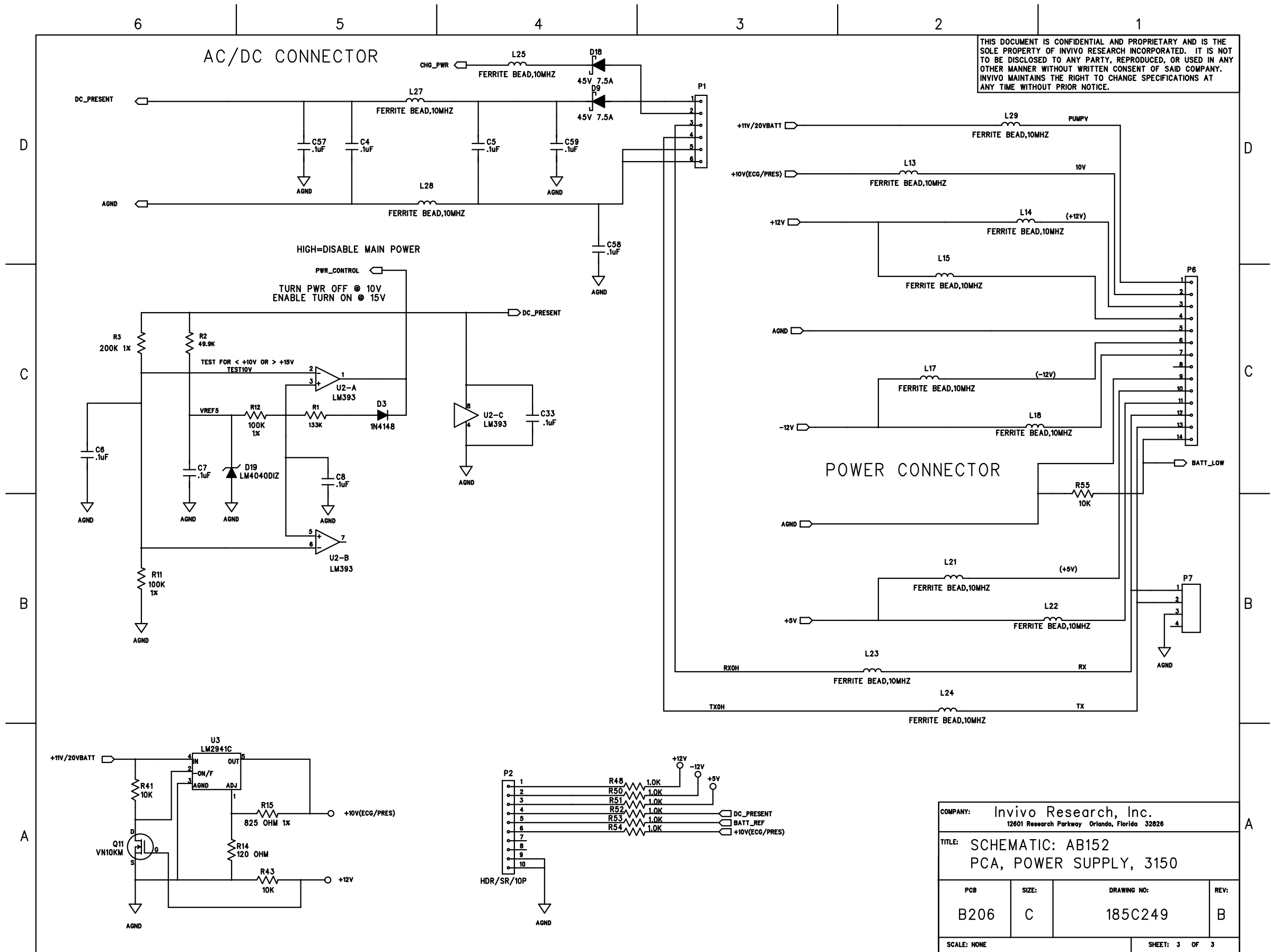
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C	PER ECN #6575	JRB	24APR98
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DRAWN:	DATED:
R. BAKER	18SEP97
CHECKED:	DATED:
QUALITY CONTROL:	DATED:
RELEASED:	DATED:

INVIVO RESEARCH, INC.			
12601 RESEARCH PARKWAY, ORLANDO, FL., 32826			
SCHEMATIC: AB116/AB116M			
PCA, MRI GATING/ANALOG OPTION, 3150/M			
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B185	C	185C224	G
SCALE: NONE		SHEET: 1 OF 1	

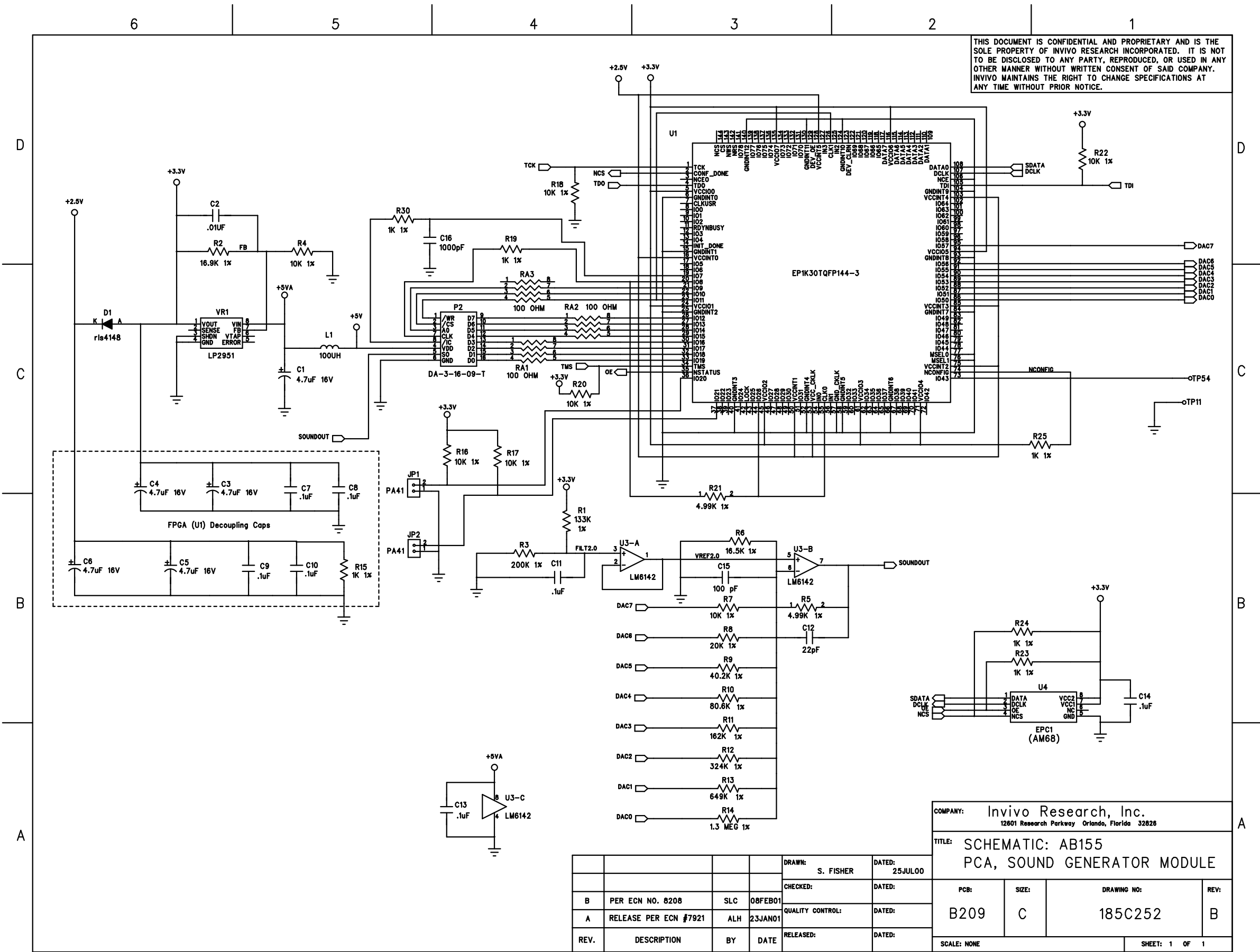






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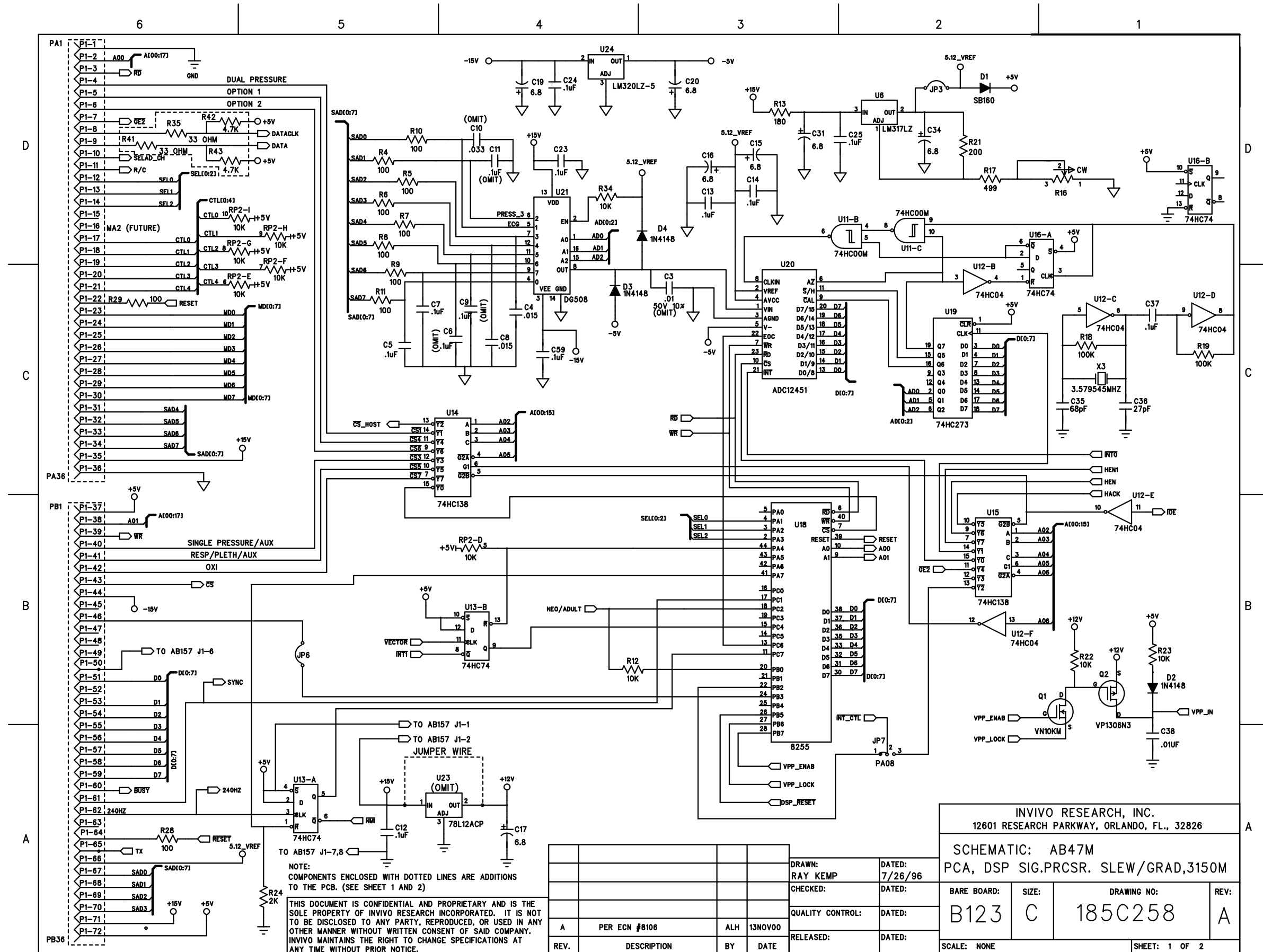
COMPANY: Invivo Research, Inc. 12601 Research Parkway Orlando, Florida 32826			
TITLE: SCHEMATIC: AB152 PCA, POWER SUPPLY, 3150			
PCB B206	SIZE: C	DRAWING NO: 185C249	REV: B
SCALE: NONE		SHEET: 3 OF 3	



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COMPANY: Invivo Research, Inc. 12801 Research Parkway Orlando, Florida 32828			
TITLE: SCHEMATIC: AB155 PCA, SOUND GENERATOR MODULE			
PCB: B209	SIZE: C	DRAWING NO: 185C252	REV: B
SCALE: NONE		SHEET: 1 OF 1	

				DRAWN: S. FISHER	DATED: 25JUL00
				CHECKED:	DATED:
B	PER ECN NO. 8208	SLC	08FEB01	QUALITY CONTROL:	DATED:
A	RELEASE PER ECN #7921	ALH	23JAN01	RELEASED:	DATED:
REV.	DESCRIPTION	BY	DATE		



NOTE:
COMPONENTS ENCLOSED WITH DOTTED LINES ARE ADDITIONS
TO THE PCB. (SEE SHEET 1 AND 2)

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INVIVO MAINTAINS THE RIGHT TO CHANGE SPECIFICATIONS AT
ANY TIME WITHOUT PRIOR NOTICE.

REV.	DESCRIPTION	BY	DATE
A	PER ECN #8106	ALH	13NOV00

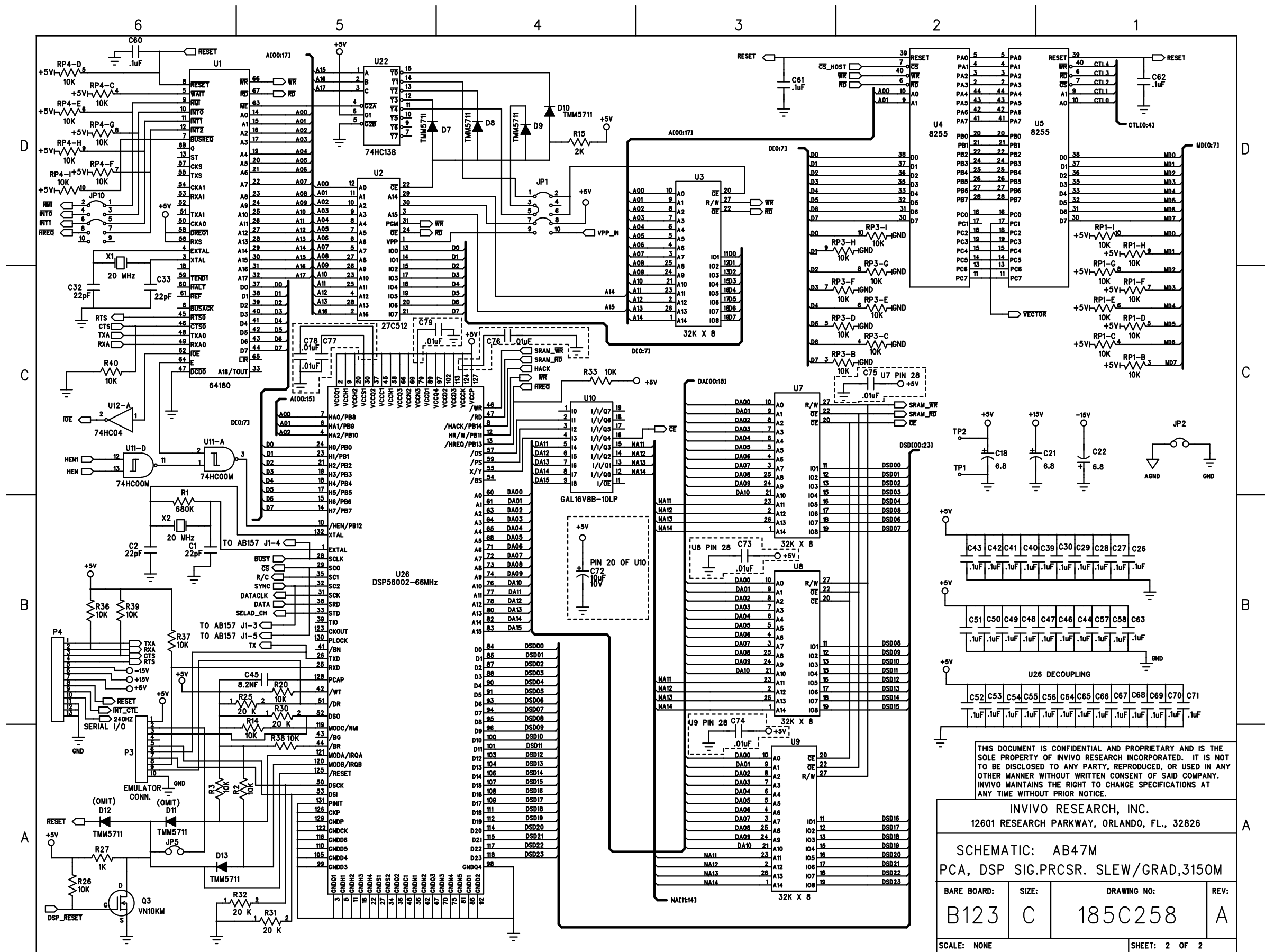
DRAWN: RAY KEMP	DATED: 7/26/96
CHECKED:	DATED:
QUALITY CONTROL:	DATED:
RELEASED:	DATED:

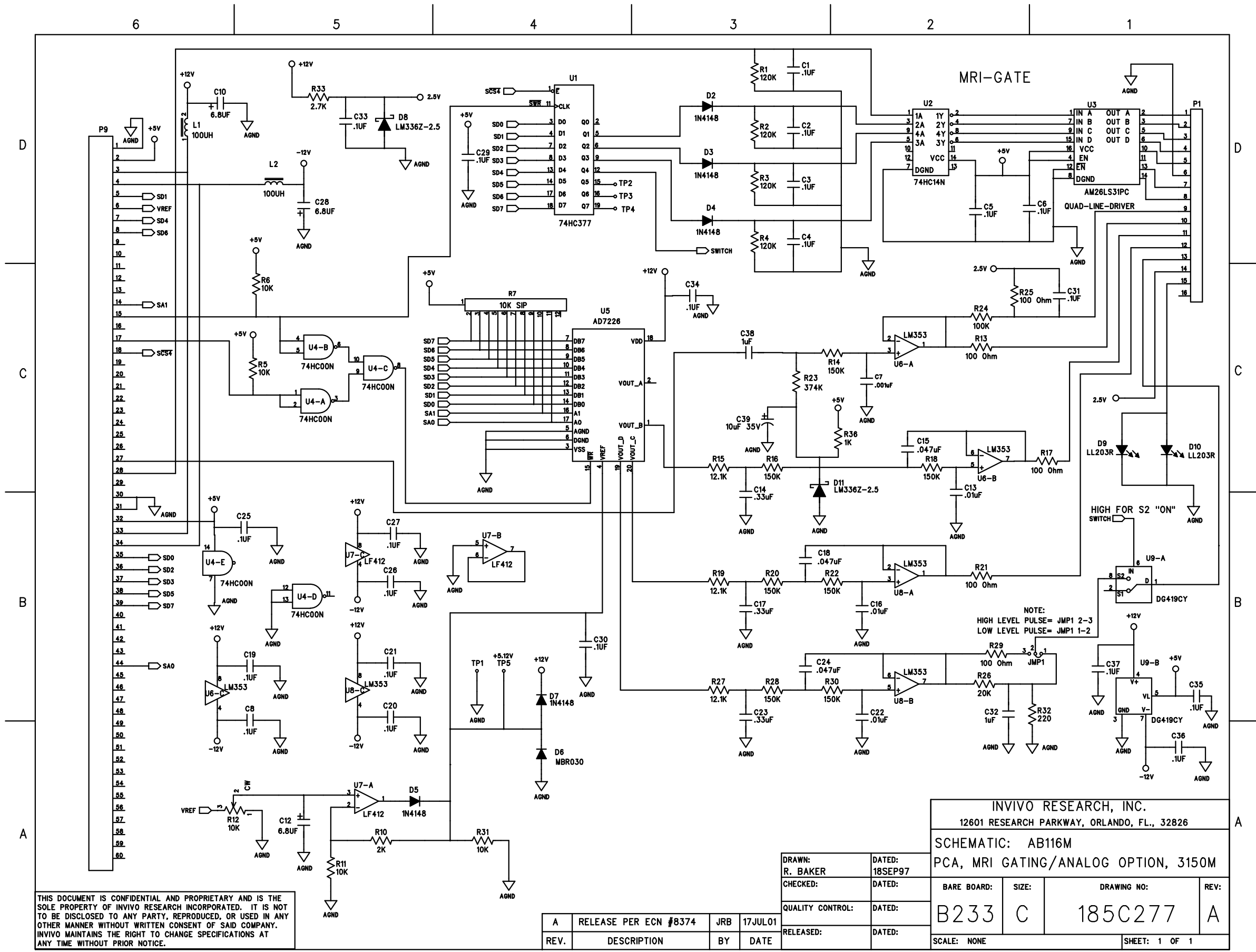
INVIVO RESEARCH, INC.
12601 RESEARCH PARKWAY, ORLANDO, FL., 32826

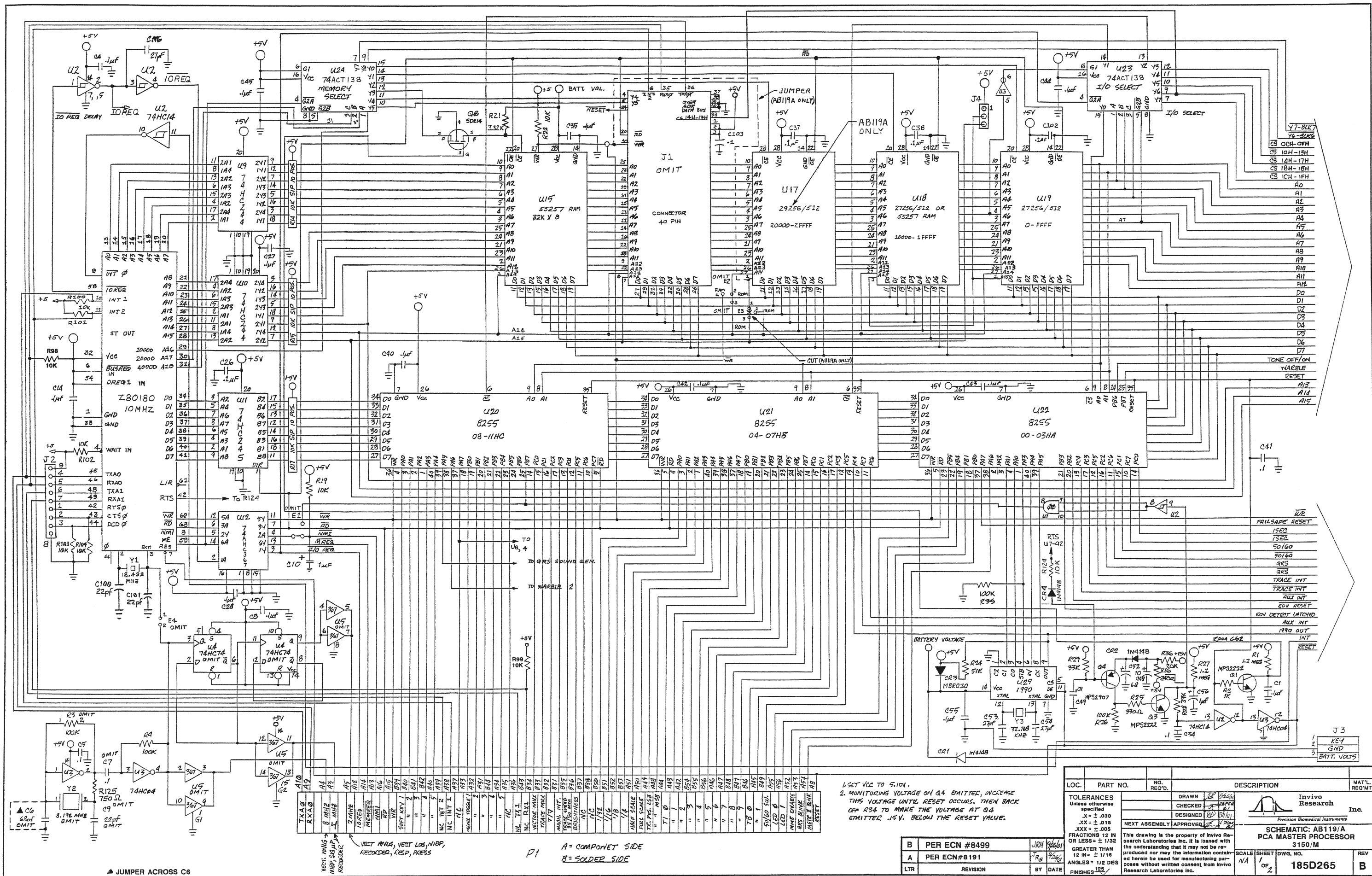
SCHEMATIC: AB47M
PCA, DSP SIG.PRC SR. SLEW/GRAD,3150M

BARE BOARD: B123	SIZE: C	DRAWING NO: 185C258	REV: A
---------------------	------------	------------------------	-----------

SCALE: NONE SHEET: 1 OF 2







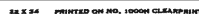
1. SET VCC TO 5.10V.
2. MONITORING VOLTAGE ON Q4 EMITTER, INCREASE THIS VOLTAGE UNTIL RESET OCCURS. THEN BACK OFF R34 TO MAKE THE VOLTAGE AT Q4 EMITTER .15V. BELOW THE RESET VALUE.

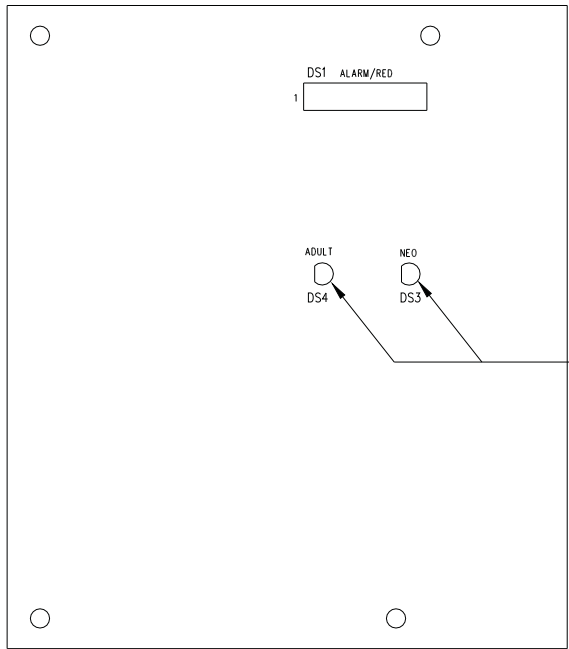
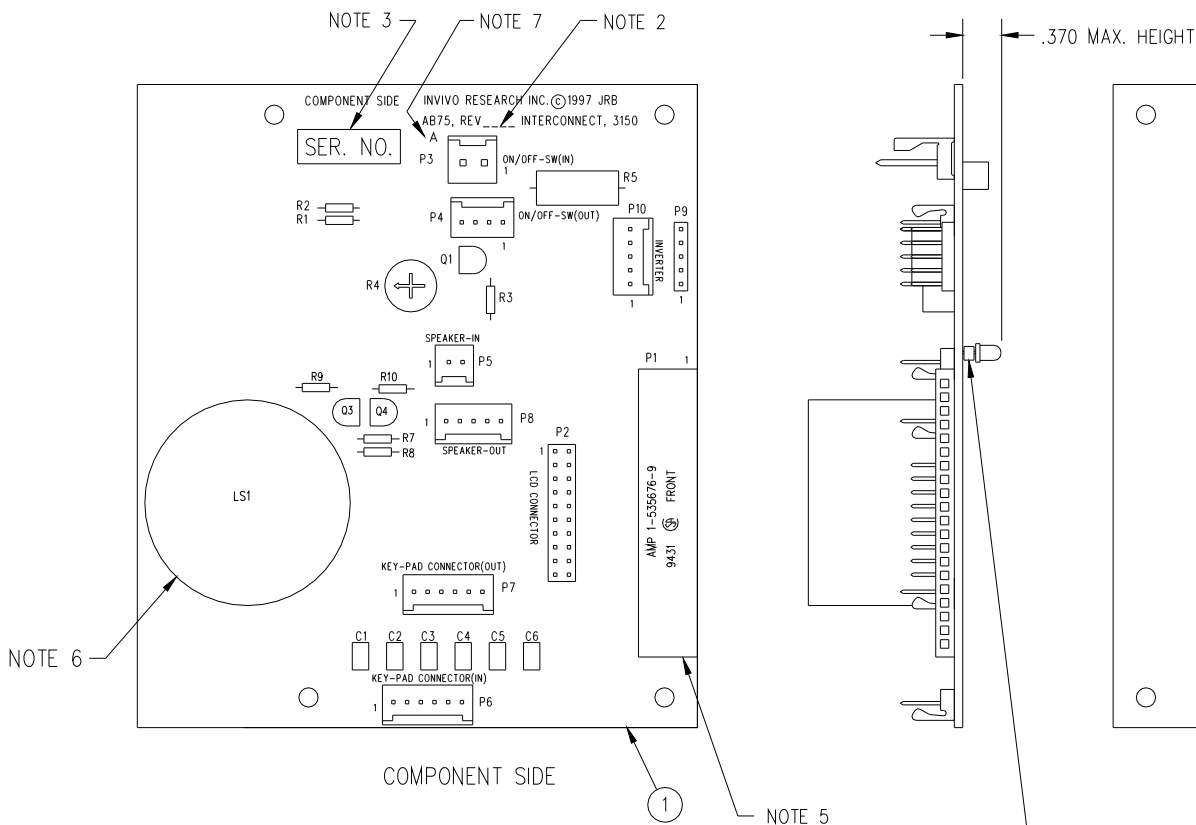
B	PER ECN #8499	JRH	9/26/01
A	PER ECN #8191	RS	9/26/01
LTR	REVISION	BY	DATE

LOC.	PART NO.	NO. REV'D.	DESCRIPTION	MAT'L. REQ'T.
TOLERANCES	UNLESS OTHERWISE SPECIFIED			
XX = ± .030				
XX = ± .015				
XXX = ± .005				
FRACTIONS 12 IN OR LESS = 1/32				
GREATER THAN 12 IN = 1/16				
ANGLES = 1/2 DEG				
FINISHES 125				

DESIGNED	APPROVED	INVO
INVO	INVO	INVO

SCHEMATIC: AB119/A	PCA MASTER PROCESSOR
3150/M	
SCALE SHEET DWG. NO.	REV
1 OF 2	185D265
	B





NOTES

1. WORKMANSHIP TO CONFORM TO IPC CLASS II REQUIREMENTS.
2. USING INDELIBLE INK IN CONTRASTING COLOR, PLACE CURRENT ASSEMBLY REV. IN SPACE PROVIDED.
3. BOARD REQUIRES SERIALIZED LABELING WITH THE FOLLOWING INFORMATION:
UNIQUE SERIAL NO., ASSEMBLY P/N & CURRENT REV. LEVEL.
PLACE SERIAL NUMBER LABEL IN THIS AREA-ORIENT AS SHOWN.
4. INSTALL LEDS DS3 AND DS4 PERPENDICULAR TO BOARD ($\pm 3^\circ$) WITH CATHODE (FLAT SIDE) ORIENTED AS SHOWN.
5. INSTALL P1 WITH FRONT OF CONNECTOR TOWARDS EDGE OF BOARD.
6. OMIT LS1 (HE63) ON AB75A.
7. USING INDELIBLE INK IN CONTRASTING COLOR, ADD AN "A" UNDER "AB75" WHEN PRODUCING AB75A.

NOTE 6

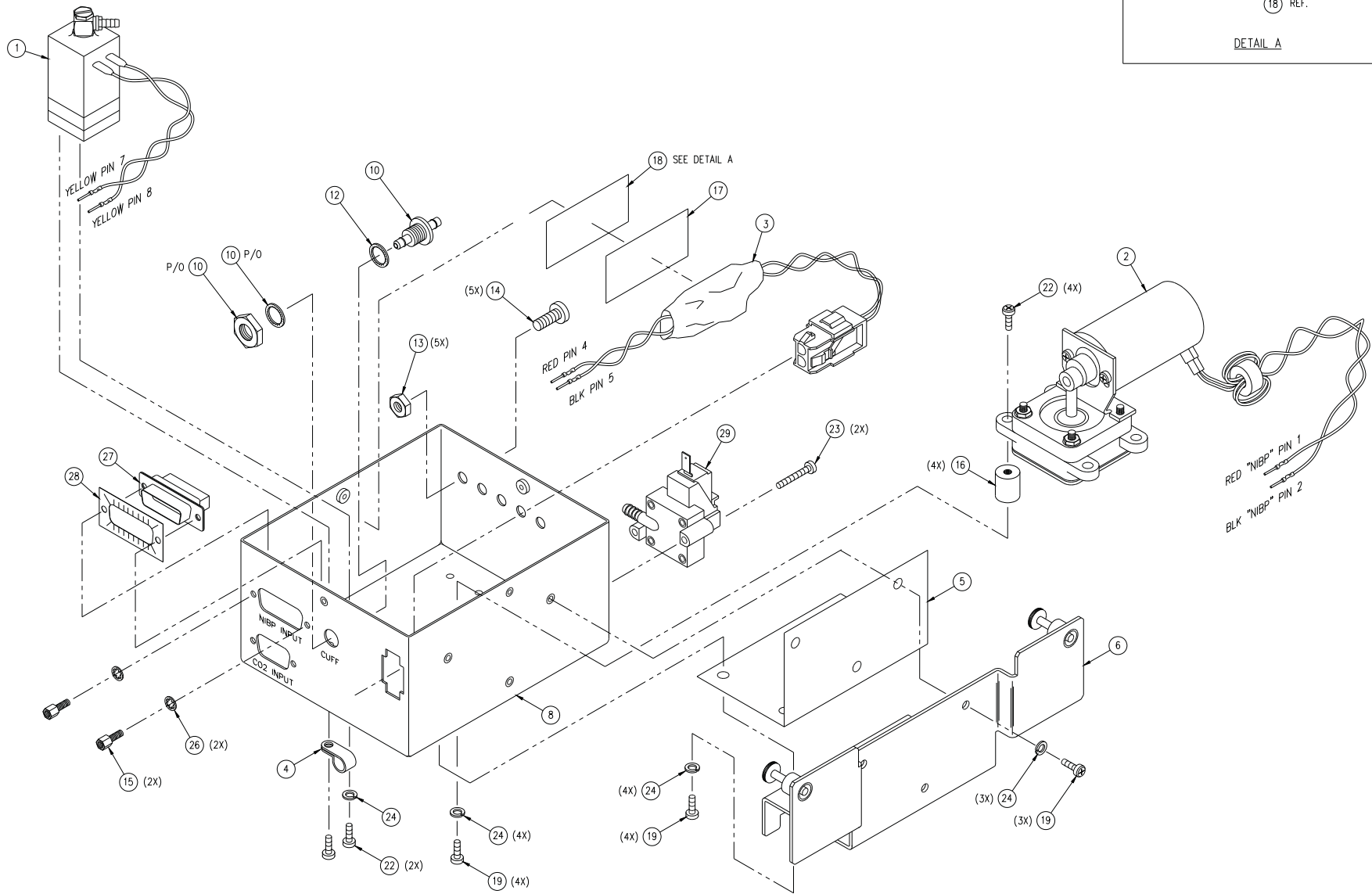
LS1	HE63	1	PIEZO ALARM, 70 -90 dB, 2.7 KHZ
2	HI23	4	INSULATOR GLASS BEAD
R4	RP21	1	RES, 50K POT, .5W, 20%, 1T
R5	R147	1	RES, 18K, 1W, 5%, GB1835
R9,10	RF126	2	RES, 681 OHM, 1%, .125W, MF
R7,8	RF01	2	RES, 2K, .125W, 1%, MF
DS3,4	DL17	2	LED, GREEN, HLMP1540
C1-C6	CF09	6	CAP, 470pF EMI SUPPRESSION FILTER, NPO
R1,2	R048	2	RES, 150 OHM, .25W, 5%, CF
R3	R003	1	RES, 5.1K, .25W, 5%, CF
Q3	Q001	1	TRANSISTOR, MPS2907A, PNP
Q1,4	Q000	2	TRANSISTOR, 2222A, T092, NPN
P4	PA344	1	CONN, 4P, SR, HDR, ST, LKG, .100 CTR
P3	PA253	1	CONN, 2P, SR, HDR, ST, LKG, .156 CTR
P6,7	PA341	2	CONN, 6P, SR, HDR, ST, LKG, .100 CTR
P5	PA340	1	CONN, 2P, SR, HDR, ST, LKG, .100 CTR
P8,10	PA338A	2	CONN, 5P, SR, HDR, ST, LKG, .100 CTR
P1	PA353	1	CONN, 20P, SR, RCPT., SIDE ENTRY, .100 CTRS
P9	PA06	1	CONN, 5P, SR, HDR, ST, UNSHRD, (.10)
P2	PA02	1	CONN, 20P, DR, HDR, ST, UNSHR, (.10)
DS1	DL09	1	BAR, LIGHT, LED, INTNSTY., E/F
1	B169	1	PCB, INTERCONNECT, 3150, REV. B
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION

C	PER ECN #7862	CHY	27JUN00
B	PER ECN #6297	JRB	27JAN98
A	RELEASED, ECN #5825	JRB	15AUG97

REV.	DESCRIPTION	BY	DATE
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UNLESS OTHERWISE SPECIFIED TOLERANCES ARE .XX = $\pm$ — .XXX = $\pm$ — ANGLES = $\pm$ —	DRAWN DESIGNED CHECKED APPROVED	JRB CN	7JUL97 40CT95
DO NOT SCALE THIS DRAWING !!!			

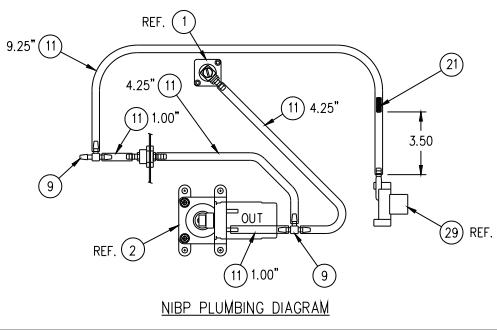
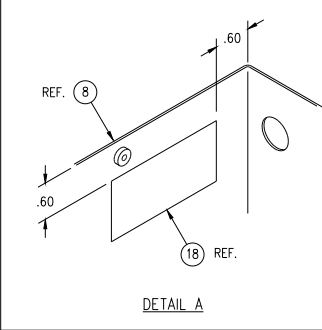
 Invivo Research Inc. <i>PRECISION BIOMEDICAL INSTRUMENTS</i> <i>Subsidiary of Invivo Corporation</i> 12601 RESEARCH PARKWAY, ORLANDO, FL 32826			
TITLE: ASSEMBLY: AB75/AB75A PCA, INTERCONNECT, 3150/M			
CAD SCALE 1.5:1	SHEET 1 OF 1	DWG. NO. 194C708	REV. C



AP45 ASSEMBLY SHOWN

NOTES:
1. CONNECT WIRES OF ITEMS 1, 2, & 3 TO P/N PA358A CONNECTOR (ITEM 26) AS INDICATED.

REF. ASSEMBLY INSTRUCTION AIO49



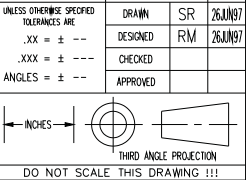
(NOT SHOWN)

(NOT SHOWN)

(NOT SHOWN)

31	M050	A/R	ADHESIVE, LOCTITE 425, BLUE, ASSURE
30	M007	A/R	ADHESIVE, LOCTITE 262, RED, THDLK
29	S007D	1	SWITCH, OVER PRESSURE, ADULT DC
28	PA366	1	GASKET, EMI/RFI, DB15 CONNECTOR
27	PA358	1	CONN, DB15M, SNAP-IN, W/CLINCH NUTS
26	NW09	2	LOCKWASHER, IT, #4, SS, NON-MAG
25	NW44N	4	WASHER, LOCK, SPLIT, #4 X .209 X .025, SS, NM
24	NW43N	12	WASHER, LOCK, SPLIT, #6 X .250 X .031, SS, NM
23	NS105N	2	SCR, #4-40 X 3/4 LG. PHMS-XR, SS, NM
22	NS10N	6	SCR, #6-32 X 3/8 LG. PHMS-XR, SS, NM
21	NS09	1	SCR, SET, #8-32 X 1/2 LG. CP. PT, SS
20	NS04N	4	SCR, #4-40 X 1/4 LG. PHMS-XR, SS, NM
19	NS02N	11	SCR, #6-32 X 1/4 LG. PHMS-XR, SS, NM
18	M031	2.00	FASTENER, HOOK, BLACK, 1" WIDE
17	M032	2.00	FASTENER, LOOP, BLACK, 1" WIDE
16	H001	4	SHOCK ABSORBER, #6-32 X 1/2 LG.
15	HS28N	2	SCREWLOCK, FEMALE, #4-40 X .312 LG, NM
14	NS20N	5	SCR, #10-32 X 1/2 LG, PHMS, NM
13	NO34N	5	NUT, HEX, #10-32, SS, NM
12	NW27	1	LOCKWASHER, IT, SS, 5/16" x .61 x .03
11	HP09	19.75	TUBING, SBR, .250" X .125" X .0625"
10	HP121	1	FITTING, BULKHEAD, 1/8 I.D. TUBE
9	HP05	2	FITTING, MINIATURE, TEE, BARBED
8	HM66M	1	BOX, PNEUMATICS, 3150
7	HM66L	1	COVER, BOX, PNEUMATICS, 3150
6	HM66K	1	BRKT., MTC., PNEUMATICS, 3150
5	HM66AK	1	SHIELD, PNEUMATICS BOX, 3150
4	HC01	1	CLAMP 1/4" NX2
3	AS143	1	ASSY, INVERTER, 3150
2	AP44	1	ASSY, PUMP, 3150
1	AP43	1	ASSY, VALVE, 3150
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION

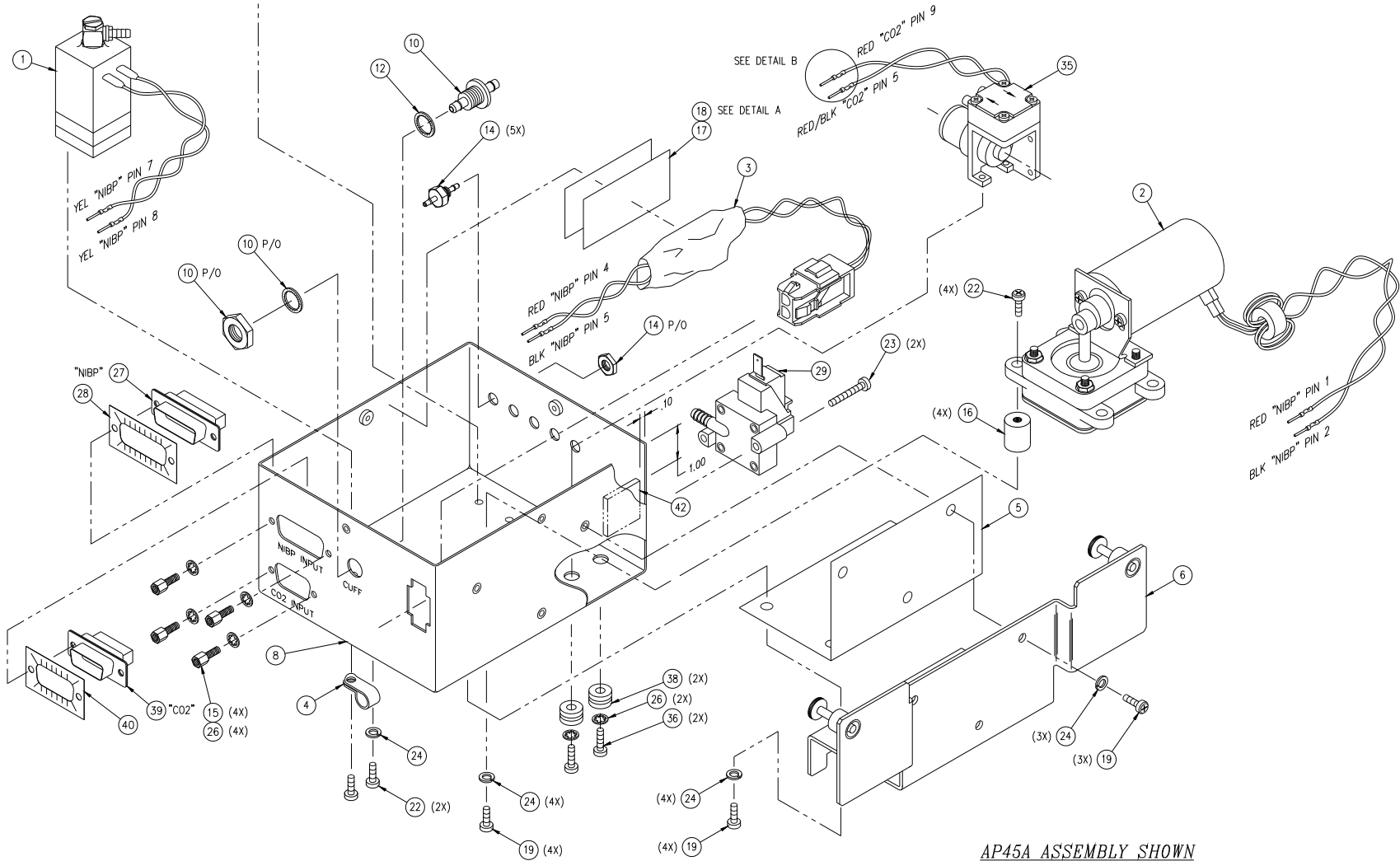
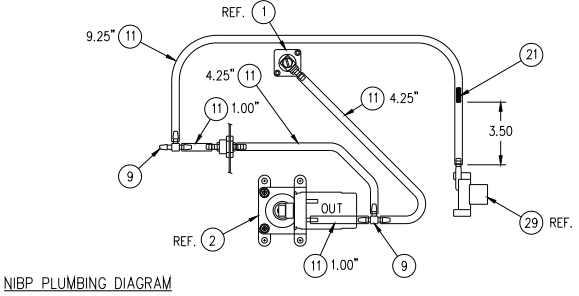
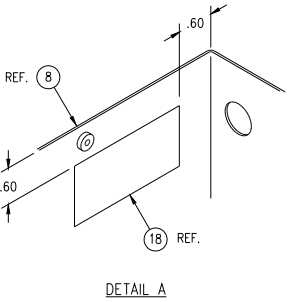
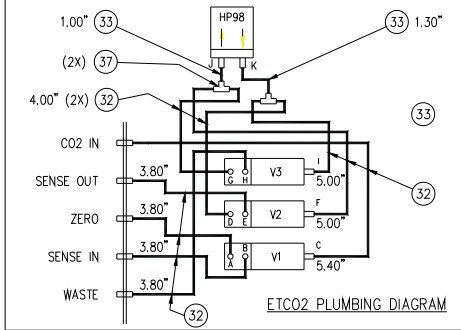
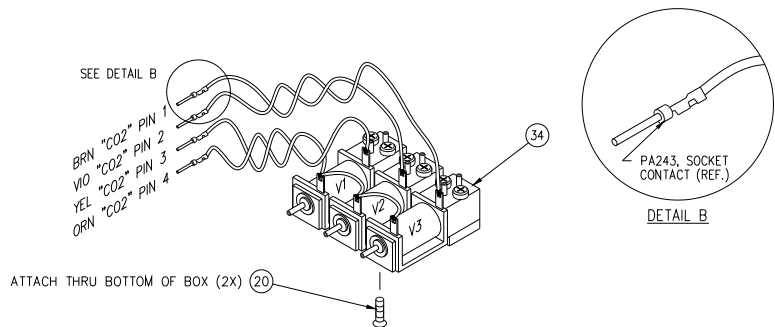
K	PER ECN #8250	CHY 14MAR01	D	ECN #6539	KCO 15APR98
J	PER ECN #7937	SR 29SEP00	C	ECN #6450	RLM 11MAR98
H	PER ECN #7868	CHY 5JUL00	B	ECN #6328	KCO 28JAN98
G	PER ECN #7240	CHY 29JUN99	A	RELEASED, ECN #5812	SR NOV97
F	ECN #6961	CHY 22DEC98	REV.	DESCRIPTION	BY DATE
E	ECN #6802	CHY 9SEP98			
REV.	DESCRIPTION	BY	DATE	THIS DOCUMENT IS CONFIDENTIAL AND PROPRIETARY AND IS THE SOLE PROPERTY OF INVIVO RESEARCH INCORPORATED (RI). IT IS NOT TO BE DISCLOSED TO ANY PARTY, REPRODUCED OR USED IN ANY OTHER MANNER WITHOUT WRITTEN CONSENT OF RI. INVIVO RESEARCH INC. MAINTAINS THE RIGHT TO CHANGE SPECIFICATIONS AT ANY TIME WITHOUT PRIOR NOTICE.	



Invivo Research Inc.
PRECISION BIOMEDICAL INSTRUMENTS
Subsidiary of Invivo Corporation
12601 RESEARCH PARKWAY., ORLANDO, FL 32826

TITLE: ASSEMBLY: AP45 & AP45A
ASSY, PNEUMATICS, 3150

CAD SCALE: NONE	SHEET: 1 of 2	DWG NO: 194C760	REV: K
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AP45A ASSEMBLY SHOWN

- NOTES:
1. CONNECT WIRES OF ITEMS 1, 2, & 3 TO P/N PA358A CONNECTOR (ITEM 26) AS INDICATED.
 2. INSTALL HC27 GROMMETS (ITEM 38) INTO HM66M BOX (ITEM 8).
 3. SECURE AP47 PUMP (ITEM 35) TO HM66M BOX (ITEM 8) USING (2) NS26N SCREWS (ITEM 36). DO NOT CRUSH GROMMETS.
 4. CONNECT WIRES OF ITEMS 34 & 35 TO P/N PA225 CONNECTOR (ITEM 39) AS INDICATED.

42	MO00C	1.0"	TAPE, CLOSED CELL FOAM, SS, .12 THK X 1.0" W
41			
40	PA202	1	GASKET, EMI/RFI, 9 PIN CONNECTOR
39	PA225	1	CONN, DB9 RCPT, SNP-IN W/CLINCHNUT
38	HC27	2	GROMMET, RIBBED, .155 ID, .250 HOLE
37	HP80	2	FITTING, TEE, 1/16 X 1/8 X 1/16
36	NS26N	2	SCR., #4-40 X 3/8 LG. PHMS-XR, NM
35	AP47	1	ASSY, PUMP, ETC02, 3150
34	AP46	1	ASSY, PNEUMATIC VALVE, ETC02, 3150
33	HP00	2.30"	HOSE, NEO, PATIENT, .250" X .125"
32	HP50	38.60"	TUBING, .06 ID X .12 OD X .03, CLEAR
31	MO50	A/R	ADHESIVE, LOCTITE 425, BLUE, ASSURE
30	MO07	A/R	ADHESIVE, LOCTITE 262, RED, THREADLOK
29	SO07D	1	SWITCH, OVER PRESSURE, ADULT DC
28	PA366	1	GASKET, EMI/RFI, DB15 CONNECTOR
27	PA358	1	CONN, DB15M, SNAP-IN, W/CLINCH NUTS
26	NW09	6	LOCKWASHER, IT, #4, SS, NON-MAG
25	NW44N	4	WASHER, LOCK, SPLIT, #4 X .209 X .025, SS, NM
24	NW43N	12	WASHER, LOCK, SPLIT, #6 X .250 X .031, SS, NM
23	NS105N	2	SCR, #4-40 X 3/4 LG. PHMS-XR, SS, NM
22	NS10N	6	SCR, #6-32 X 3/8 LG. PHMS-XR, SS, NM
21	NS09	1	SCR, SET, #8-32 X 1/2 LG, CP. PT, SS, NM
20	NS04N	6	SCR, #4-40 X 1/4 LG. PHMS-XR, SS, NM
19	NS02N	11	SCR, #6-32 X 1/4 LG. PHMS-XR, SS, NM
18	MO31	2.00"	FASTENER, HOOK, BLACK, 1" WIDE
17	MO32	2.00"	FASTENER, LOOP, BLACK, 1" WIDE
16	HO01	4	SHOCK ABSORBER, #6-32 X 1/2 LG.
15	HS28N	4	SCREWLOCK, FEMALE, #4-40 X .312 LG, NM
14	HP122	5	FITTING, BULKHEAD, 1/16 I.D. TUBE

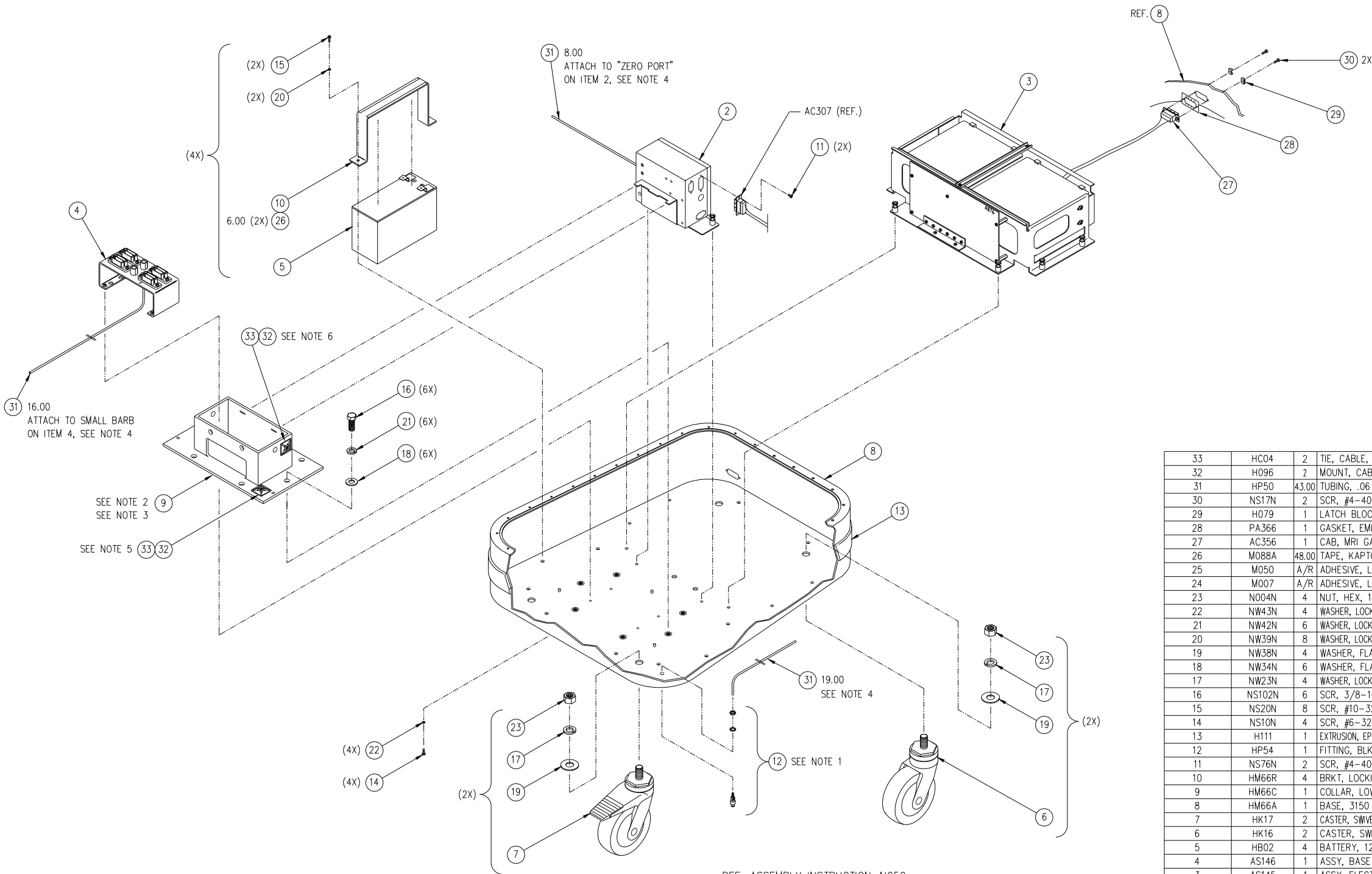
13			
12	NW27	1	LOCKWASHER, IT, SS, 5/16" x .61 x .03
11	HP09	19.75"	TUBING, SBR, .250" X .125" X .062"
10	HP121	1	FITTING, BULKHEAD, 1/8 I.D. TUBE
9	HP05	2	FITTING, MINIATURE, TEE, BARBED
8	HM66M	1	BOX, PNEUMATICS, 3150
7	HM66L	1	COVER, BOX, PNEUMATICS, 3150
6	HM66K	1	BRKT., MTC., PNEUMATICS, 3150
5	HM66AK	1	SHIELD, PNEUMATICS BOX, 3150
4	HC01	1	CLAMP 1/4" NX2
3	AS143	1	ASSY, INVERTER, 3150
2	AP44	1	ASSY, PUMP, 3150
1	AP43	1	ASSY, VALVE, 3150

ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:	DRAWN	SR	26JUN97
.XX = ± .01	DESIGNED	RM	26JUN97
.XXX = ± .005	CHECKED		
ANGLES = ± .005	APPROVED		

Invivo Research Inc.
PRECISION BIOMEDICAL INSTRUMENTS
Subsidiary of Invivo Corporation
12601 RESEARCH PARKWAY., ORLANDO, FL 32826
TITLE: ASSEMBLY: AP45 & AP45A
ASSY, PNEUMATICS, 3150
CAD SCALE: NONE SHEET: 2 of 2 DWG NO: 194C760 REV: K

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REF. ASSEMBLY INSTRUCTION AI049



NOTES:

1. INSTALL P/N HP54 FITTING (ITEM 12) USING P/N M007 RED LOCTITE (ITEM 24) AS REQUIRED.
2. ROUTE TUBING FROM P/N AP45 PNEUMATICS ASSY. THRU SIDE OPENING OF P/N HM66C COLLAR (ITEM 9).
3. ROUTE CABLES FROM P/N AS145 ELECTRONICS SYS. (ITEM 3) THRU SIDE OPENING OF COLLAR.
4. P/N HP50 TUBING (ITEM 31) IS TO BE ATTACHED AS SHOWN ON ONE END ONLY, WITH REMAINING LENGTHS COILED NEATLY IN BOTTOM OF BASE FOR FUTURE USE.
5. SECURE P/N AC340 SPO2 CABLE AT THIS LOCATION. DO NOT WRAP THE AC340 AROUND ANY OTHER WIRES.
6. SECURE HOSES (2X) AND TWO VIOLET WIRES AT THIS LOCATION.

REF. ASSEMBLY INSTRUCTION AI050
REF. INTERCONNECT DIAGRAM C90D056

(NOT SHOWN)

D	PER ECN #6450	SR	11MAR98
C	PER ECN #6306	SR	21JAN98
B	PER ECN #6248	JRB	9JAN98
A	RELEASED, ECN #5812	SR	11/97
REV.	DESCRIPTION	BY	DATE
E	PER ECN #8308	SR	24APR01
REV.	DESCRIPTION	BY	DATE

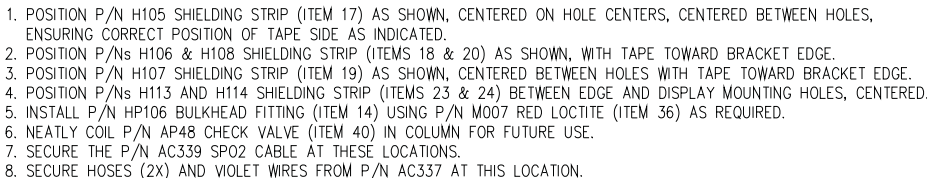
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33	HC04	2	TIE, CABLE, NYLON, 5.6 LG.
32	H096	2	MOUNT, CABLE TIE, ADHESIVE BACKED
31	HP50	43.00	TUBING, .06 X .12 X .03, CLEAR
30	NS17N	2	SCR, #4-40 X 1/2 LG. PHMS-XR, NM
29	H079	1	LATCH BLOCKS, CONN. .090 PANEL
28	PA366	1	GASKET, EMI/RFI. 15 PIN CONNECTOR
27	AC356	1	CAB, MRI GATING OUTPUT, 3150
26	M088A	48.00	TAPE, KAPTON, .004 THK, 1/2" WD, RL
25	M050	A/R	ADHESIVE, LOCTITE, 425, BLUE, ASSURE
24	M007	A/R	ADHESIVE, LOCTITE, 262, RED, THDLK
23	N004N	4	NUT, HEX, 1/2-13, SS, NM
22	NW43N	4	WASHER, LOCK, SPLIT, #6 X .250 X .031, SS, NM
21	NW42N	6	WASHER, LOCK, SPLIT, 3/8 X .683 X .094, SS, NM
20	NW39N	8	WASHER, LOCK, SPLIT, #10 X .334 X .047, SS, NM
19	NW38N	4	WASHER, FLAT, 1/2 X 1.250 X .104, SS, NM
18	NW34N	6	WASHER, FLAT, 3/8 X .812 X .080, SS, NM
17	NW23N	4	WASHER, LOCK, SPLIT, 1/2 X .873 X .125, SS, NM
16	NS102N	6	SCR, 3/8-16 X 1.00 LG. HHMS, SS, NM
15	NS20N	8	SCR, #10-32 X 1/2 LG. PHMS-XR, SS, NM
14	NS10N	4	SCR, #6-32 X 3/8 LG. PHMS-XR, SS, NM
13	H111	1	EXTRUSION, EPDM, 1.0 WD, W/HEAT ACTIVATED TAPE
12	HP54	1	FITTING, BLKHD, LUER, FEMALE, BRASS
11	NS76N	2	SCR, #4-40 X 3/16 LG. PHMS-XR, NM
10	HM66R	4	BRKT, LOCKING, BATTERY, 3150
9	HM66C	1	COLLAR, LOWER, 3150
8	HM66A	1	BASE, 3150
7	HK17	2	CASTER, SWIVEL, W/LOCK, 4 INCH, 1/2"-13 STEM
6	HK16	2	CASTER, SWIVEL, 4 INCH, 1/2"-13 STEM
5	HB02	4	BATTERY, 12V, 6.5 AH
4	AS146	1	ASSY, BASE INTERCONNECT, 3150
3	AS145	1	ASSY, ELECTRONICS SYS, 3150
2	AP45	1	ASSY, PNEUMATICS, 3150
1	AC320	1	CABLE, BATTERY/POWER SUPPLY, 3150

ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:			
.XX = ±			
.XXX = ±			
ANGLES = ±			

DRAWN	SR	7AUG97
DESIGNED	RLM	JAN96
CHECKED		
APPROVED		

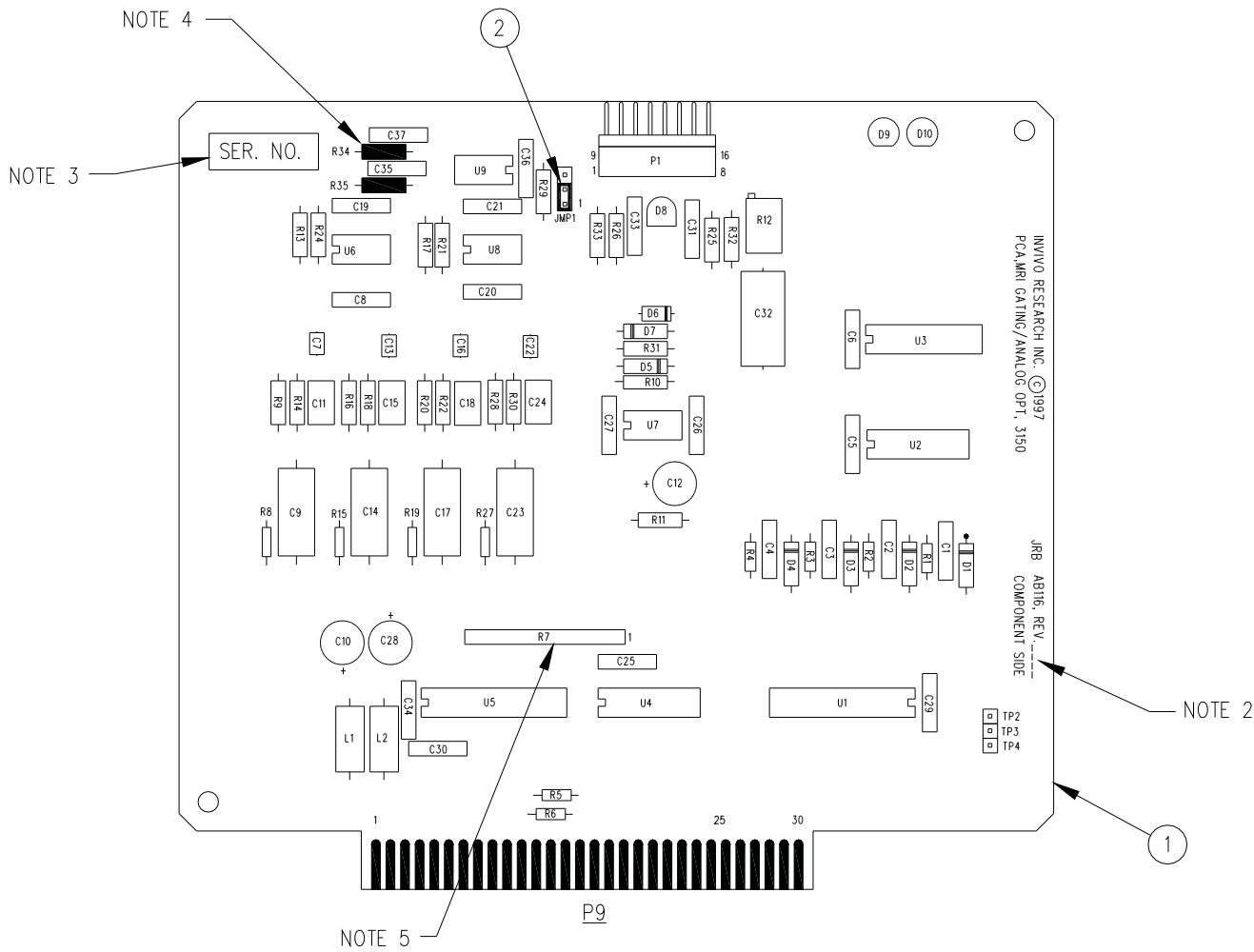
Invivo Research Inc.
PRECISION BIOMEDICAL INSTRUMENTS
Subsidiary of Invivo Corporation
12601 RESEARCH PARKWAY., ORLANDO, FL 32826
TITLE: ASSEMBLY: AS144
ASSY, BASE, 3150
CAD SCALE: 1 : 1
SHEET: 1 of 1
DWG. NO.: 194C771
REV.: E



REF. INTERCONNECT DIAGRAM C90D056

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE: .XXX = ± .XXX = ± ANGLES = ±	DRAWN	SR	12/16/97		Inviso Research Inc. <i>PRECISION BIOMEDICAL INSTRUMENTS</i> Subsidiary of Inviso Corporation 12601 RESEARCH PARKWAY., ORLANDO, FL 32826
	DESIGNED	RLM	3/16/97		
	CHECKED				
	APPROVED				

	<table border="0" style="width: 100%;"> <tr> <td style="width: 30%;">TITLE:</td> <td>ASSEMBLY: AS147 ASSY, COLUMN, 3150</td> </tr> <tr> <td style="width: 20%;">CAD SCALE:</td> <td>1 : 1</td> </tr> <tr> <td style="width: 20%;">SHEET:</td> <td>1 of 1</td> </tr> <tr> <td style="width: 20%;">DWG. NO.:</td> <td>194C772</td> </tr> <tr> <td style="width: 20%;">REV.:</td> <td>C</td> </tr> </table>	TITLE:	ASSEMBLY: AS147 ASSY, COLUMN, 3150	CAD SCALE:	1 : 1	SHEET:	1 of 1	DWG. NO.:	194C772	REV.:	C
TITLE:	ASSEMBLY: AS147 ASSY, COLUMN, 3150										
CAD SCALE:	1 : 1										
SHEET:	1 of 1										
DWG. NO.:	194C772										
REV.:	C										

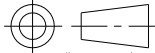


ASSEMBLY NOTES:

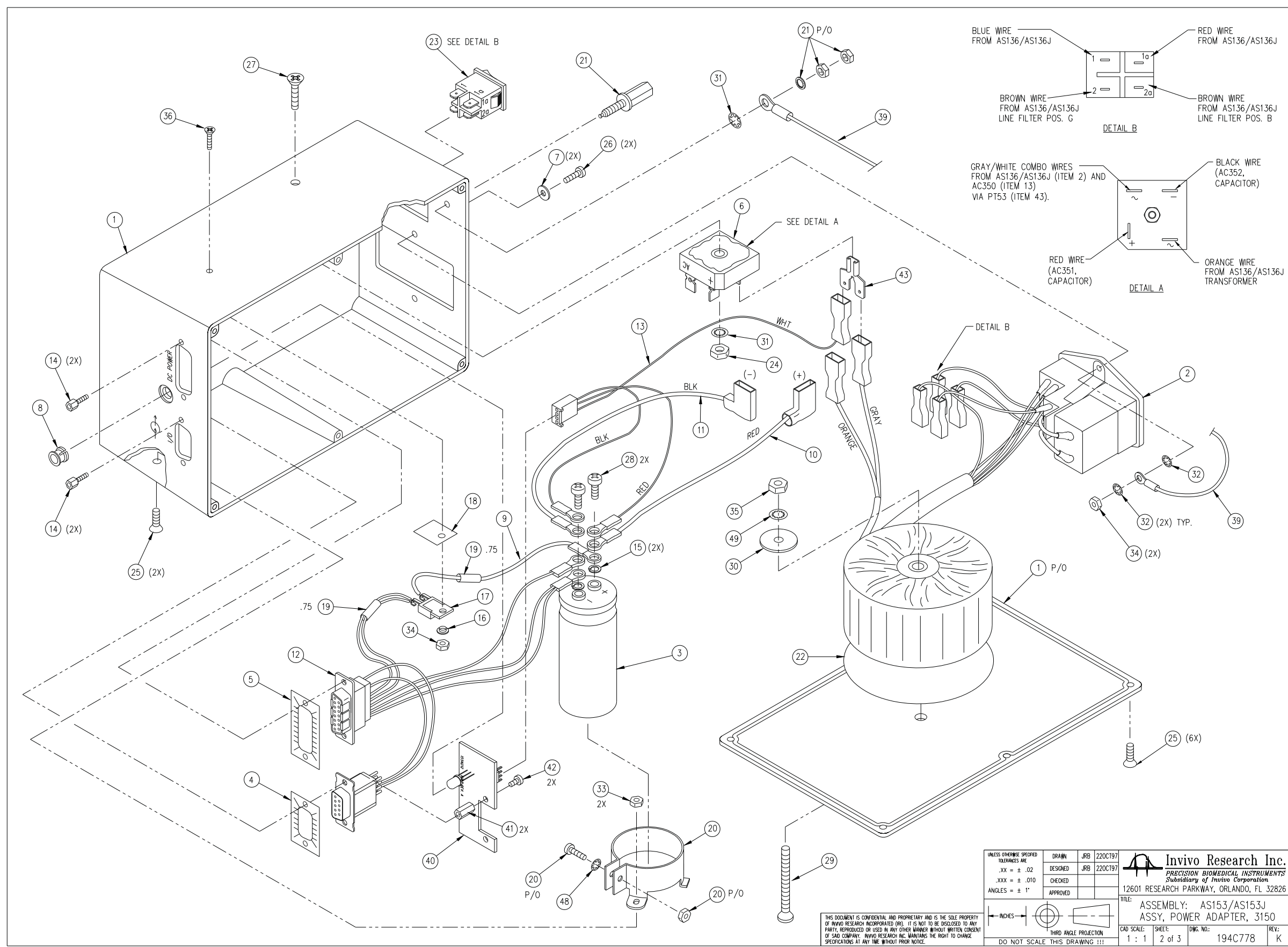
1. APPLY P/N M050 LOCTITE (REF.) TO METAL THREADS UNLESS OTHERWISE NOTED.
2. ADD 0.75 LENGTHS OF P/N WT01 HEAT SHRINK (ITEM 19) TO P/N AC349 CABLE WIRES (ITEM 12) AND TO P/N AC354 CABLE (ITEM 9). J-HOOK AND SOLDER THOSE WIRES TO P/N D030 DIODE (ITEM 17) LEADS, ORIENTED AS SHOWN.
3. ROUTE TO INSPECTION.
4. SHRINK THE SLEEVING IN PLACE ON THE D030 DIODE LEADS TO COVER THE SOLDER JOINTS.
5. ADD P/N NW01 LOCKWASHER (ITEM 48) TO SCREW SUPPLIED WITH P/N HC30 CLAMP (ITEM 20). ORIENT SCREW IN CLAMP AS SHOWN. PLACE P/N CA21 CAPACITOR (ITEM 3) INTO CLAMP AND TIGHTEN.
6. ATTACH THE BLACK AC349 CABLE WIRES, AC352 (BLACK) CABLE (ITEM 11), AND BLACK AC350 CABLE WIRE (ITEM 13) TO THE NEGATIVE (–) TERMINAL OF CA21 CAPACITOR. CARE MUST BE TAKEN TO ORIENT THE LEADS FOR BEST FIT WHEN THE CAPACITOR IS MOUNTED IN THE BOX.
7. ATTACH THE AC354 CABLE (FROM D030), AC351 (RED) CABLE (ITEM 10) AND (RED) AC350 CABLE WIRE, TO THE POSITIVE (+) TERMINAL OF CA21 CAPACITOR. CARE MUST BE TAKEN TO ORIENT THE LEADS FOR BEST FIT WHEN THE CAPACITOR IS MOUNTED IN THE BOX.
8. SECURE D030 DIODE TO THE WALL OF P/N HM66AL BOX (ITEM 1), USING P/N H101 INSULATOR (ITEM 18), P/N NS114N SCREW (ITEM 36), P/N H103 BUSHING (ITEM 16) AND P/N N002 NUT (ITEM 34).
9. SECURE THE CAPACITOR CLAMP TO THE WALL OF HM66AL USING TWO P/N NS111N SCREWS (ITEM 25) AND TWO P/N N001 NUTS (ITEM 33).
10. MOUNT THE TWO AC349 CONNECTORS TO THE WALL OF THE BOX USING TWO P/N HS28BN SCREWLOCKS (ITEM 14) FOR EACH CONNECTOR, P/N PA202 9–PIN GASKET (ITEM 4), AND P/N PA366 15–PIN GASKET (ITEM 5).
11. MOUNT AB123 (ITEM 40) TO THE BACK OF THE DB9 CONNECTOR OF AC349 USING P/N HS59 STANDOFFS (ITEM 41) AND P/N NS04N SCREWS (ITEM 42). THE LED SHOULD PROTRUDE THROUGH THE HOLE IN THE HM66AL BOX AND SHOULD BE MOUNTED USING USING P/N H025 LED HOLDER (ITEM 8).
12. PLUG AC350 CONNECTOR ONTO AB123, P1.
13. APPLY P/N M014 HEAT SINK COMPOUND (REF.) EVENLY OVER THE MOUNTING SURFACE OF P/N DB01 DIODE BRIDGE (ITEM 6). ORIENT THE BRIDGE PER DETAIL A AND SECURE IT TO THE WALL OF THE BOX USING NS112N SCREW (ITEM 27), P/N NW08 LOCK WASHER (ITEM 31) AND P/N N003 NUT (ITEM 24).
14. SECURE P/N HE16 BINDING POST (ITEM 21) AND P/N AW149 TERMINAL (ITEM 39) TO THE HM66AL BOX WALL USING HARDWARE SUPPLIED WITH P/N HE16 AND NW08 LOCKWASHER POSITIONED AS SHOWN.
15. ORIENT P/N S016 SWITCH (ITEM 23) PER DETAIL B AND PRESS IT INTO HM66AL BOX.
16. SELECT P/N AS136/AS136J TRANSFORMER ASSEMBLY (ITEM 2) FROM CHART. ORIENT AND MOUNT FILTER PART OF TRANSFORMER ASSEMBLY INTO THE BOX USING TWO P/N NS17 SCREWS (ITEM 26), TWO P/N NW12 WASHERS (ITEM 7), TWO P/N NW09 LOCK WASHERS (ITEM 32) AND TWO P/N N002 NUTS (ITEM 34). SECURE P/N AW149 TERMINAL TO THE SCREW SHOWN, USING A SECOND NW09 LOCKWASHER.
17. CONNECT FOUR AS136/AS136J WIRES TO THE S016 SWITCH (PER DETAIL B) AND CONNECT WIRES TO PREVIOUSLY MOUNTED P/N DB01 DIODE BRIDGE (PER DETAIL A). CONNECT WHITE WIRE OF AC350 AND GREY WIRE OF AS136/AS136J TO P/N DB01 DIODE BRIDGE USING PT53 ADAPTER (ITEM 43).
18. PRINT ASSEMBLY NUMBER, REVISION, LOT NUMBER AND ASSEMBLER INITIALS ON INSIDE SURFACE OF COVER WHERE IT WON'T BE COVERED BY THE TRANSFORMER.
19. ORIENT THE BOX LID SO THE TRANSFORMER MOUNTING HOLE IS CLOSER TO THE AC349 CONNECTORS THAN TO THE S016 SWITCH. SET THE HM66AL BOX ON ITS SIDE AND ATTACH THE AS136/AS136J TRANSFORMER ASSEMBLY AND THE H136 INSULATOR (ITEM 22) TO THE BOX COVER USING P/N NS113N SCREW (ITEM 29), P/N NW06 FLAT WASHER (ITEM 30), P/N NW18 LOCK WASHER (ITEM 49), P/N M007 RED LOCTITE (REF.) AND P/N N034N NUT (ITEM 35).
20. APPLY P/N M008A SEALER (REF.) TO THE DIODE LEADS TO PROTECT AND STABILIZE THEM. ALSO APPLY M008A TO SECURE H025 LED HOLDER.
21. ROUTE TO INSPECTION.
22. SECURE THE LID TO THE BOX USING SIX P/N NS111N SCREWS (ITEM 25).
23. MOUNT TWO 4.00 LENGTHS OF P/N M031 HOOK FASTENER (ITEM 37) TO THE LID 1.00 FROM EACH END. SECURE TWO 4.00 LENGTHS OF P/N M032 LOOP FASTENER (ITEM 38) TO THE HOOK FASTENER BUT DO NOT STRIP THE BACKING.
24. SELECT P/N L2059/L2059J INPUT VOLTAGE LABEL (ITEM 47) FROM CHART AND MOUNT CENTERED AND BELOW TOP VELCRO STRIP. SEE BOTTOM VIEW ON SHEET 3 FOR APPROXIMATE LOCATION.
25. SELECT P/N L2057/L2057J PRODUCT ID LABEL (ITEM 45) FROM CHART AND MOUNT ON BOTTOM OF UNIT CENTERED ABOVE VELCRO STRIP AND BELOW TRANSFORMER MOUNTING HOLE. SEE BOTTOM VIEW ON SHEET 3 FOR APPROXIMATE LOCATION.
26. MOUNT P/N L137A CE COMPLIANCE LABEL (ITEM 44) AND P/N L185 DATE OF MFR LABEL (ITEM 51) BELOW INPUT VOLTAGE LABEL, ON EACH SIDE OF CENTER. SEE BOTTOM VIEW ON SHEET 3 FOR APPROXIMATE LOCATION.
27. MOUNT P/N L2058 CAUTION LABEL (ITEM 46) ON TOP OF UNIT. SEE SHEET 3 FOR LOCATING DIMENSIONS.
28. WRAP EACH ASSEMBLY IN P/N M082 BUBBLE WRAP (ITEM 50), LEAVING THE ENDS OPEN.
29. ROUTE TO INSPECTION.

(NOT SHOWN)

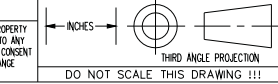
REF.	M050	A/R	ADHESIVE, LOCTITE 425, BLUE ASSURE
REF.	M014	A/R	COMPOUND, HEATSINK 276–1372
REF.	M008A	A/R	ADHESIVE/SEALANT, RTV
REF.	M007	A/R	ADHESIVE, LOCTITE 262, RED, THD. LK.
51	L185	1	LABEL, DATE OF MANUFACTURE
50	M082	2 FT.	BUBBLE WRAP, ANTI-STATIC, 12" WD, 319BBL
49	NW18	1	LOCKWASHER, INT TOOTH, SS #10
48	NW01	1	LOCKWASHER, INT TOOTH, SS #6
47	SEE CHART	1	LABEL, INPUT VOLT., 3150 SERIES AC ADAPTER
46	L2058	1	LABEL, CAUTION, 3150 SERIES AC ADPTR.
45	SEE CHART	1	LABEL, PROD. I.D., 3150 SERIES AC ADAPTER
44	L137A	1	LABEL, CE COMPLIANCE, MDD (SEMKO)
43	PT53	1	FAST-ON TAB ADAPTER, M/M/F
42	NS04N	2	SCR, #4–40 X 1/4 LG. PHMS–XR, NM
41	HS59	2	STNDF, 3/16 HEX, F/F, #4–40 X .38
40	AB123	1	PCA, POWER/CHARGER LED, 3150, REV. A
39	AW149	1	WIRE ASSY, GROUND, POWER ADAPTER, 3150
38	M032	8.00	FASTENER, LOOP, BLACK, 1" WIDE
37	M031	8.00	FASTENER, HOOK, BLACK, 1" WIDE
36	NS114N	1	SCR, #4–40 X .50 LG. FHMS–XR, NM, BLK
35	N034N	1	NUT, HEX, #10–32, SS, NM
34	N002	3	NUT, HEX, #4–40, ZN
33	N001	2	NUT, HEX, #6–32, ZN
32	NW09	2	LOCKWASHER, IT, #4, SS, NON–MAG.
31	NW08	1	LOCKWASHER, INT. TOOTH, #8 SS
30	NW06	1	WASHER, 187 X .750 X .048, ZN
29	NS113N	1	SCR, #10–32 X 1–3/4 LG. FHMS–XR, NM, BLK
28	NS55	2	SCR, #10–32 X 3/8 LG. PHMS–XR, ZN
27	NS112N	1	SCR, #8–32 X 3/4 LG. FHMS, XR, NM, BLK
26	NS17	2	SCR, #4–40 X 1/2 LG. PHMS–XR, ZN
25	NS111N	8	SCR, #6–32 X 1/2 LG. FHMS–XR, NM, BLK
24	N003	1	NUT, HEX, #8–32, ZN
23	S016	1	SWITCH, ROCKER, DPST
22	H136	1	INSULATOR, TRANSFORMER, TOROIDAL
21	HE16	1	BINDING POST, METAL
20	HC30	1	CLAMP, CAPACITOR MOUNT, 1.40 DIA.
19	WT01	1.50	HEATSHRINK, .125 I.D., BLACK
18	H101	1	INSULATOR, THERMALLY CONDUCTIVE
17	D030	1	DIODE, SCHOTTKY, 45V, 7.5A
16	H103	1	BUSHING, SHLDR, NYLON, .120 O.D.
15	NW39N	2	WASHER, LOCK, SPLIT, #10, SS, NM
14	HS28BN	4	SCWLCK, FEML, #4–40 X .375 LG, NM
13	AC350	1	CAB, POWER ADAPTER LED, 3150
12	AC349	1	CAB, POWER–I/O, 3150
11	AC352	1	CAB, NEG. D/C VOLTAGE, 3150
10	AC351	1	CAB, POS. D/C VOLTAGE, 3150
9	AC354	1	CAB, DIODE POWER, 3150
8	H025	1	LED HOLDER, .250
7	NW12	2	WASHER, #4 x .125 x .312 x .030
6	DB01	1	DIODE BRIDGE, 10 AMP
5	PA366	1	GASKET, EMI/RFI, 15PIN CONNECTOR
4	PA202	1	GASKET, EMI/RFI, 9PIN CONNECTOR
3	CA21	1	CAP, 10,000 uF, –10%/+5%, 35V, AL
2	SEE CHART	–	ASSY, MAINS INPUT & TRANSFORMER
1	HM66AL	1	BOX, POWER ADAPTER, 3150
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION

K	PER ECN #8341	CHY	24MAY01	D	PER ECN #6711	JWT	06JUL98	UNLESS OTHERWISE SPECIFIED TOLERANCES ARE .XX = ± .02 .XXX = ± .010 ANGLES = ± 1°	DRAWN	JRB	22OCT97	 Inviso Research Inc. <i>PRECISION BIOMEDICAL INSTRUMENTS</i> <i>Subsidiary of Inviso Corporation</i> 12601 RESEARCH PARKWAY, ORLANDO, FL 32826 TITLE: ASSEMBLY: AS153/AS153J ASSY, POWER ADAPTER, 3150 CAD SCALE: 1 : 1 SHEET: 1 of 3 DWG NO: 194C778 REV: K
J	PER ECN #7663	CHY	25JUL00	C	PER ECN #6432	JRB	20MAR98		DESIGNED	JRB	22OCT97	
H	PER ECN #7772	JRH	16JUN00	B	PER ECN #6367	SR	28JAN98		CHECKED			
G	PER ECN #7252	CHY	19JUL99	A	RELEASED, ECN #6080	JRB	24OCT97		APPROVED			
F	PER ECN #7083	CHY	1MAR99	REV.	DESCRIPTION	BY	DATE					
E	PER ECN #6769	SR	11SEP98									
REV.	DESCRIPTION	BY	DATE	THIS DOCUMENT IS CONFIDENTIAL AND PROPRIETARY AND IS THE SOLE PROPERTY OF INVISO RESEARCH INCORPORATED (RI). IT IS NOT TO BE DISCLOSED TO ANY PARTY, REPRODUCED OR USED IN ANY OTHER MANNER WITHOUT WRITTEN CONSENT OF SAG COMPANY. INVISO RESEARCH INC. MAINTAINS THE RIGHT TO CHANGE SPECIFICATIONS AT ANY TIME WITHOUT PRIOR NOTICE.				 THIRD ANGLE PROJECTION		DO NOT SCALE THIS DRAWING !!!		

REF. WIRING DIAGRAM C90C073



UNLESS OTHERWISE SPECIFIED TOLERANCES ARE	DRAWN	JRB	220CT97
.XX = ± .02	DESIGNED	JRB	220CT97
.XXX = ± .010	CHECKED		
ANGLES = ± 1°	APPROVED		

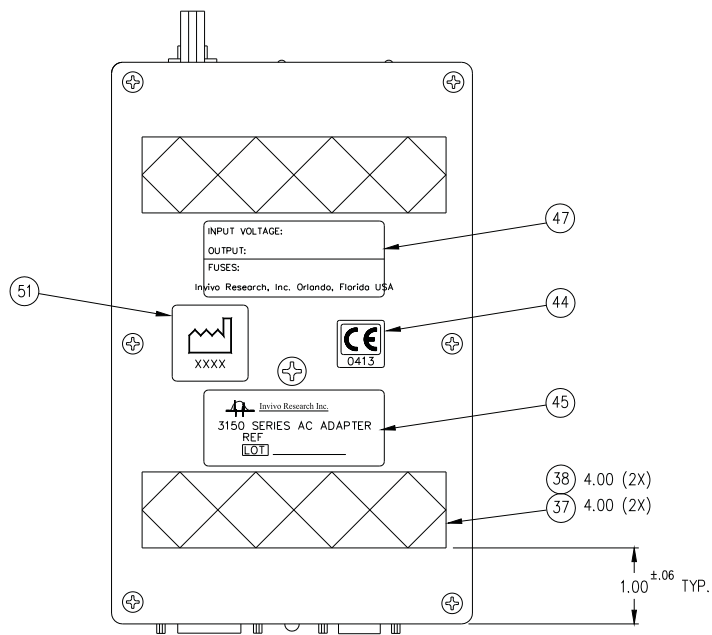


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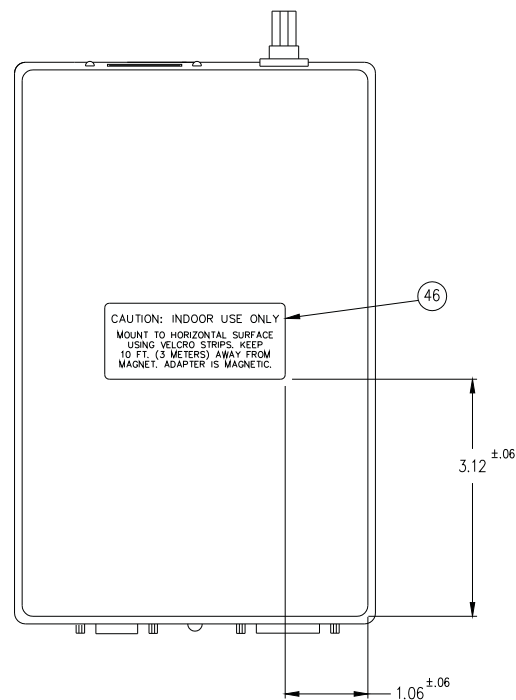
TITLE: ASSEMBLY: AS153/AS153J
ASSY, POWER ADAPTER, 3150

CAD SCALE: 1 : 1 SHEET: 2 of 3 DWG. NO.: 194C778 REV: K

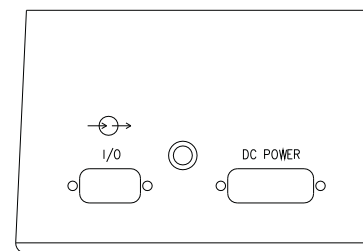
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BOTTOM VIEW



TOP VIEW



END VIEW

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.XX = ± .02	DESIGNED	JRB	220CT97
.XXX = ± .010	CHECKED		
ANGLES = ± 1°	APPROVED		



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TITLE: ASSEMBLY: AS153/AS153J ASSY, POWER ADAPTER, 3150			
CAD SCALE:	SHEET:	DWG. NO.:	REV:
1 : 1	3 of 3	194C778	K

LF21 REV. A

EON5877



R6	R010	1	RES, 2.7 OHM, .25W, 5%, CF
R5,9,10,19, 22,30-32,34, 100-104, 123,124, 98,99	RF07	18	RES, 10K, .125W, 1%, MF
R4,11,26 35,110	RF02	5	RES, 100K, .125W, 1%, MF
R2,13,23	RF17	3	RES, 1.0K, .125W, 1%, MF
R1,18,27	R013	3	RES,1.2 MEG, .25W, 5%,CF
C53,54,116	CC00	3	CAP, 27pF, 10%, 100V, X7R,CERAMIC
C48	CT13	1	CAP, 10uF, 20%, 35V, TANT.
C29,56,10	CT09	3	CAP, 1uF, 20%, 35V, TANT.
C24,49,107	CC04	3	CAP, .01uF, 10%, X7R, 50V, CERAMIC
C21	CA06	1	CAP, 100uF, 20%, 16V, RADIAL, ALUM.
C13,31,32,36,52 C117,118,119,120	CT01	9	CAP, 6.8uF, 20%, 16V, TANT.
C12,16	CA07	2	CAP, 220uF, 20%, 16V, ALUM. RADIAL
C100,101	CC01	2	CAP, 22pF, 10%, Z5U, 200V, CERAMIC

H	PER ECN #8191	JRS	14FEB01	C	PER ECN #6620	CHY	31AUG98	DESIGNED	RES	3/93
G	PER ECN #8182	CHY	2FEB01	B	PER ECN #6248	JRS	8JAN98	CHECKED		
F	PER ECN #7934	JRH	28JUL00	A	RELEASED, ECN #5960	SLC	31COT97	APPROVED		
E	PER ECN #7844	KCO	13JUN00	REV.	DESCRIPTION	BY	DATE			
D	PER ECN #7325	SR	11AUG99							

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REV. DESCRIPTION

REV. DATE

INCHES =

MM =

INCHES =

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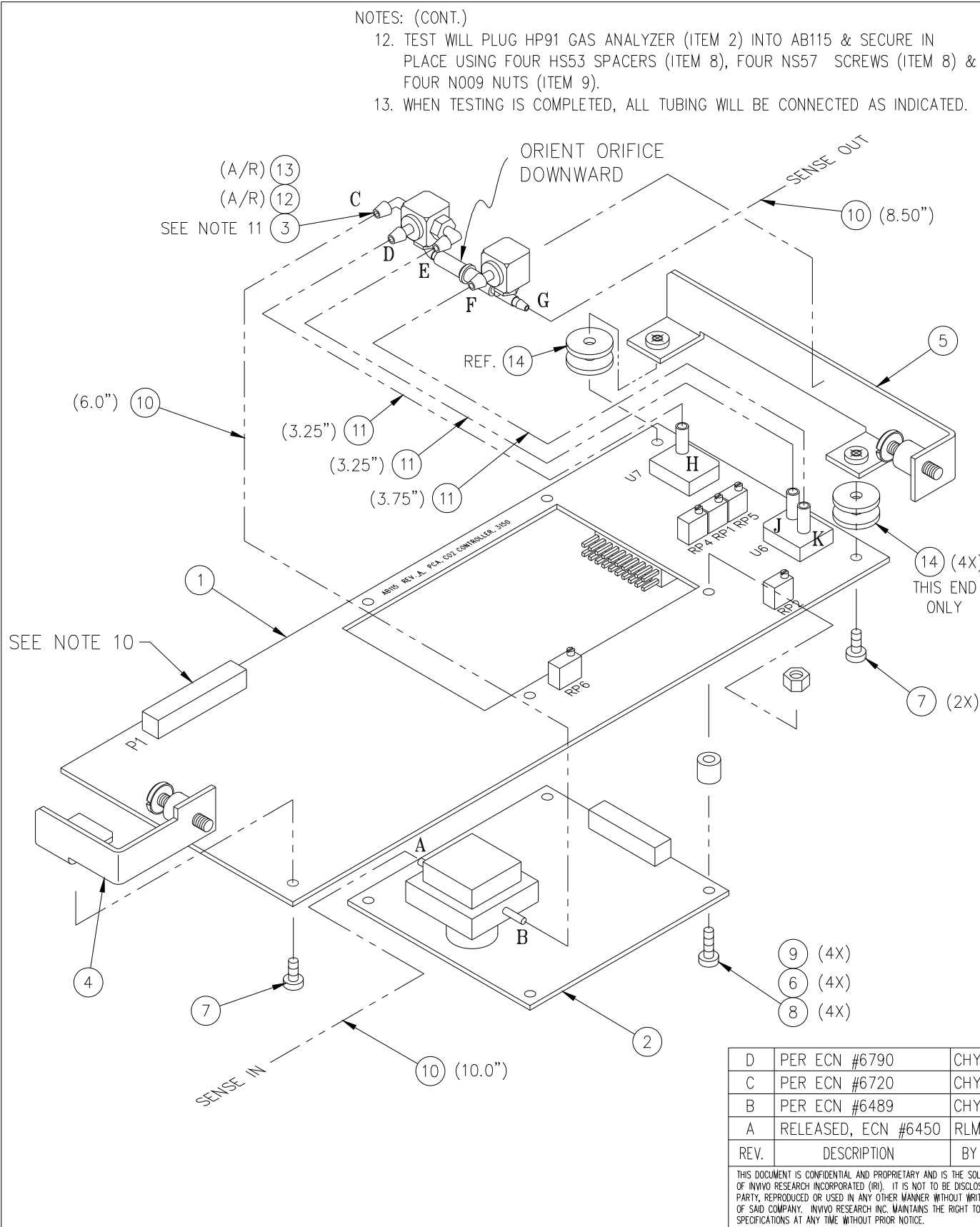
PRECISION BIOMEDICAL INSTRUMENTS
a subsidiary of Invivo Corporation

12601 RESEARCH PARKWAY, ORLANDO, FL 32826

ASSY: AB119
PCA, MASTER PROCESSOR, 12 MHZ, 3150/M

CAD SCALE: 1 SHEET 1 OF 1 DWG. NO: 194C779 REV: H

- REQUIRES SERIALIZED LABELING WITH THE FOLLOWING INFORMATION:
SERIAL NO., ASSEMBLY P/N & CURRENT REV. LEVEL. PLACE SERIAL
IN THIS AREA—ORIENT AS SHOWN.
ELEMENTS SHOWN AS SOLID ARE TO BE OMITTED.
P/N W004 JUMPER WIRE ACROSS PADS AT REF. DES. C6.
P/N W004A JUMPER WIRE, 12 LONG ACROSS JMP1 AS SHOWN.
AB155 SOUND GENERATOR MODULE (REF. DES. U32), ENSURE JUMPER
WIRE IS PLACED AND REMOVE JUMPER 2.
SOLDER SIDE OF AB19, INSERT THE AB155-32 CONNECTOR INTO THE
U32 HOLES. ENSURING P2-1 IS MATED TO U32-1, SOLDER IN PLACE.



- NOTES:
1. MOUNT HM66AN & HM66AM MTG. BRKTS. (ITEMS 4 & 5) TO AB115 PCA (ITEM 1) USING NS26N SCREWS (ITEM 7). USE FOUR NW31 WASHERS (ITEM 14) WITH HM66AN.
 2. CUT HP50 TUBING (ITEM 10) AS FOLLOWS:
(1) PC. 6.00" LG.
(1) PC. 8.50" LG.
(1) PC. 10.0" LG.
 3. CUT HP51 TUBING (ITEM 11) AS FOLLOWS:
(2) PCS. 3.25" LG.
(1) PC. 3.75" LG.
 4. CONNECT (1) 6.00" LG. PIECE OF HP50 TUBING (ITEM 10) FROM HP91 POINT "B" TO AP37A POINT "C".
 5. CONNECT (1) 3.25" LG. PIECE OF HP51 TUBING (ITEM 11) FROM AP37A POINT "D" U7 POINT "H".
 6. CONNECT (1) 3.25" LG. PIECE OF HP51 TUBING (ITEM 11) FROM AP37A POINT "E". WILL BE CONNECTED TO U6 POINT "J" AT TEST.
 7. CONNECT (1) 3.75" LG. PIECE OF HP51 TUBING (ITEM 11) FROM AP37 POINT "F" TO U6 POINT "K".
 8. CONNECT (1) 8.50" LG. PIECE OF HP50 TUBING (ITEM 10) TO AP37A POINT "G". (OTHER END UNCONNECTED).
 9. ORIENT & MOUNT AP37A MANIFOLD TO HM66AN MTG BRACKET (ITEM 5) USING M107 ADHESIVE (ITEM 13) AT LOCATION SHOWN. HOLD IN PLACE FOR A FEW MINUTES TO ALLOW ADHESIVE TO CURE WITHOUT USE OF ACCELERATOR. ADD A SMALL AMOUNT OF M008A ADHESIVE (ITEM 12) TO SECURE THE PART FIRMLY IN PLACE.
 10. USING INDELIBLE MARKER OF CONTRASTING COLOR, PRINT ASSEMBLY NUMBER, AND REVISION ON P1 CONNECTOR HOUSING.
 11. FORWARD REMAINING PARTS TO INSPECTION. PLACE PARTS IN APPROPRIATELY SIZED STATIC SHIELDED BAG. PLACE EACH SET OF BAGGED PARTS INSIDE BAG HOLDING AS156 ASSEMBLY.

14	NW31	4	WASHER, .125 x .500 x .062, NY
13	M107	A/R	ADHESIVE, LOCTITE TAK PAK 382
12	M008A	A/R	ADHESIVE/SEALANT, RTV, CLEAR, 732
11	HP51	10.25"	TUBING, .09 ID X .15 OD, TYGON
10	HP50	24.50"	TUBING, .06 ID X .12 OD, TYGON
9	N009	4	NUT, HEX, #4-40, NY
8	NS57	4	SCR., #4-40 X 1/2 LG, PHMS, NY
7	NS26N	3	SCR., #4-40 X 3/8 LG, PHMS, NM
6	HS53	4	SPACER, #4 X .19 OD X .238 LG, NY
5	HM66AN	1	MTG. BRACKET, REAR, ETCO2, 3150
4	HM66AM	1	MTG. BRACKET, FRONT, ETCO2, 3150
3	AP37A	1	ASSY, MANIFOLD, CO2
2	HP91	1	GAS ANALYZER, SIDESTREAM
1	AB115	1	PCA, ETCO2, PNEUMATICS CONTROLLER, 3150

D	PER ECN #6790	CHY	19AUG98
C	PER ECN #6720	CHY	2JUL98
B	PER ECN #6489	CHY	26MAR98
A	RELEASED, ECN #6450	RLM	6-MAR-98
REV.	DESCRIPTION	BY	DATE
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.XX = ± --	DESIGNED	RLM	FEB97
.XXX = ± ---	CHECKED		
ANGLES = ± --	APPROVED		

INCHES

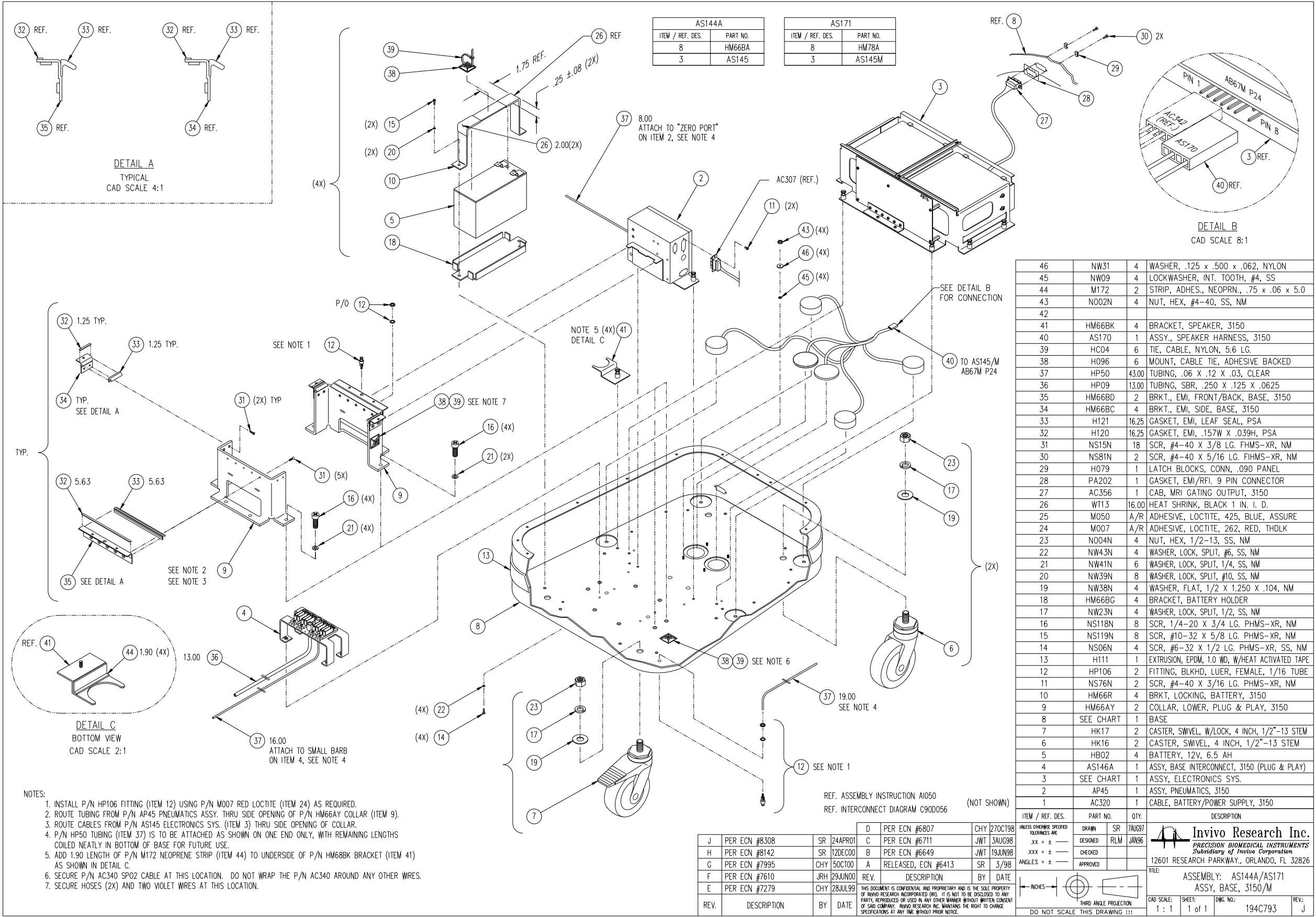
THIRD ANGLE PROJECTION

DO NOT SCALE THIS DRAWING !!!

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Subsidiary of Invivo Corporation
12601 RESEARCH PARKWAY., ORLANDO, FL 32826

TITLE: ASSEMBLY, AS156
END-TIDAL CO2 MODULE, 3150

CAD SCALE:	SHEET:	DWG. NO.:	REV.:
1 : 1	1 of 1	194C792	D



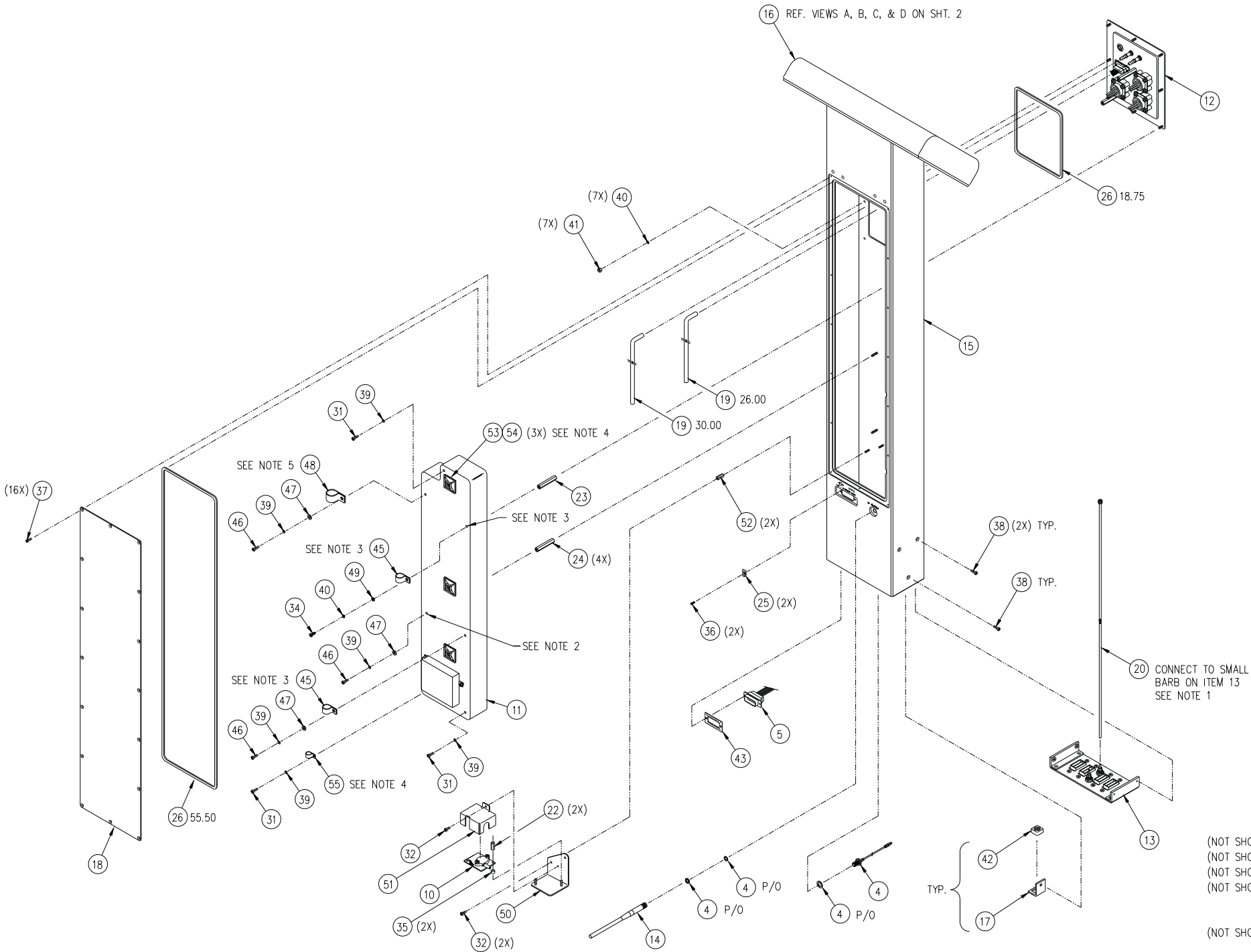
46	NW31	4	WASHER, .125 x .500 x .062, NYLON
45	NW09	4	LOCKWASHER, INT. TOOTH, #4, SS
44	M172	2	STRIP, ADHES., NEOPRN., .75 x .06 x 5.0
43	N002N	4	NUT, HEX, #4-40, SS, NM
42			
41	HM66BK	4	BRACKET, SPEAKER, 3150
40	AS170	1	ASSY., SPEAKER HARNESS, 3150
39	HC04	6	TIE, CABLE, NYLON, 5.6 LG.
38	H096	6	MOUNT, CABLE TIE, ADHESIVE BACKED
37	HP50	43.00	TUBING, .06 x .12 x .03, CLEAR
36	HP09	13.00	TUBING, SBR, .250 x .125 x .0625
35	HM66BD	2	BRKT., EMI, FRONT/BACK, BASE, 3150
34	HM66BC	4	BRKT., EMI, SIDE, BASE, 3150
33	H121	16.25	GASKET, EMI, LEAF SEAL, PSA
32	H120	16.25	GASKET, EMI, .157W x .039H, PSA
31	NS15N	18	SCR, #4-40 x 3/8 LG. FHMS-XR, NM
30	NS81N	2	SCR, #4-40 x 5/16 LG. FHMS-XR, NM
29	H079	1	LATCH BLOCKS, CONN., .090 PANEL
28	PA202	1	GASKET, EMI/RFI, 9 PIN CONNECTOR
27	AC356	1	CAB, MRI GATING OUTPUT, 3150
26	WT13	16.00	HEAT SHRINK, BLACK 1 IN. I. D.
25	M050	A/R	ADHESIVE, LOCTITE, 425, BLUE, ASSURE
24	M007	A/R	ADHESIVE, LOCTITE, 262, RED, THDLK
23	N004N	4	NUT, HEX, 1/2-13, SS, NM
22	NW43N	4	WASHER, LOCK, SPLIT, #6, SS, NM
21	NW41N	6	WASHER, LOCK, SPLIT, 1/4, SS, NM
20	NW39N	8	WASHER, LOCK, SPLIT, #10, SS, NM
19	NW38N	4	WASHER, FLAT, 1/2 x 1.250 x .104, NM
18	HM66BG	4	BRACKET, BATTERY HOLDER
17	NW23N	4	WASHER, LOCK, SPLIT, 1/2, SS, NM
16	NS118N	8	SCR, 1/4-20 x 3/4 LG. PHMS-XR, NM
15	NS119N	8	SCR, #10-32 x 5/8 LG. PHMS-XR, NM
14	NS06N	4	SCR, #6-32 x 1/2 LG. PHMS-XR, SS, NM
13	H111	1	EXTRUSION, EPDM, 1.0 WD, W/HEAT ACTIVATED TAPE
12	HP106	2	FITTING, BLKHD, LUER, FEMALE, 1/16 TUBE
11	NS76N	2	SCR, #4-40 x 3/16 LG. PHMS-XR, NM
10	HM66R	4	BRKT, LOCKING, BATTERY, 3150
9	HM66AY	2	COLLAR, LOWER, PLUG & PLAY, 3150
8	SEE CHART	1	BASE
7	HK17	2	CASTER, SWIVEL, W/LOCK, 4 INCH, 1/2"-13 STEM
6	HK16	2	CASTER, SWIVEL, 4 INCH, 1/2"-13 STEM
5	HB02	4	BATTERY, 12V, 6.5 AH
4	AS146A	1	ASSY, BASE INTERCONNECT, 3150 (PLUG & PLAY)
3	SEE CHART	1	ASSY, ELECTRONICS SYS.
2	AP45	1	ASSY, PNEUMATICS, 3150
1	AC320	1	CABLE, BATTERY/POWER SUPPLY, 3150

ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
Invivo Research Inc. PRECISION BIOMEDICAL INSTRUMENTS Subsidiary of Invivo Corporation 12601 RESEARCH PARKWAY., ORLANDO, FL 32826 TITLE: ASSEMBLY: AS144A/AS171 ASSY, BASE, 3150/M			
CAD SCALE: 1 : 1		SHEET: 1 of 1	DWG. NO.: 194C793
REV. J		REV. J	

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:
.XX = ±
.XXX = ±
ANGLES = ±

DO NOT SCALE THIS DRAWING !!!

THIRD ANGLE PROJECTION



- NOTES:
1. NEATLY COIL P/N AP48 CHECK VALVE (ITEM 20) IN COLUMN FOR FUTURE USE.
 2. SECURE CABLE GROUND WIRE TERMINAL HERE.
 3. SECURE HOSES (2X) AND VIOLET WIRES FROM AC337 AT THIS LOCATION.
 4. SECURE THE P/N AC339 SPO2 CABLE AT THESE LOCATIONS.
 5. SECURE ALL REMAINING CABLES INCLUDING RED & BLACK WIRES FROM AC337 AT THIS LOCATION.

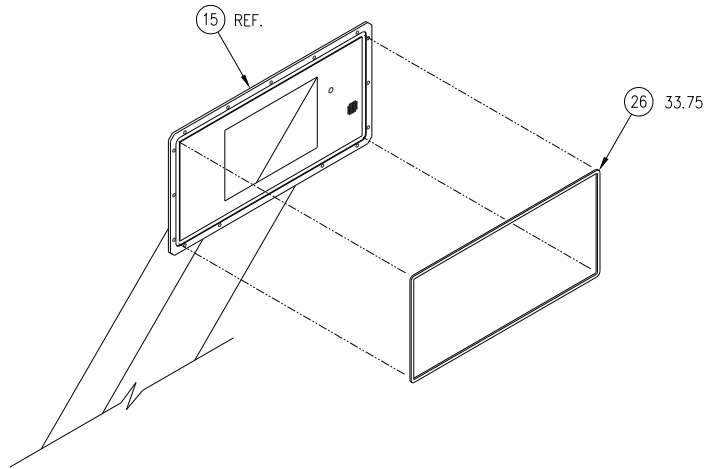
REF. ASSEMBLY INSTRUCTION AI050
REF. INTERCONNECT DIAGRAM C90D056

				D	PER ECN #7279	JWT	9AUG99
				C	PER ECN #6769	SR	11SEP98
				B	PER ECN # 6654	CHY	26AUG98
				A	RELEASED, ECN #6413	SR	3/98
				REV.	DESCRIPTION	BY	DATE
				E	PER ECN #7371	JWT	17SEP99
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REV.	DESCRIPTION	BY	DATE				

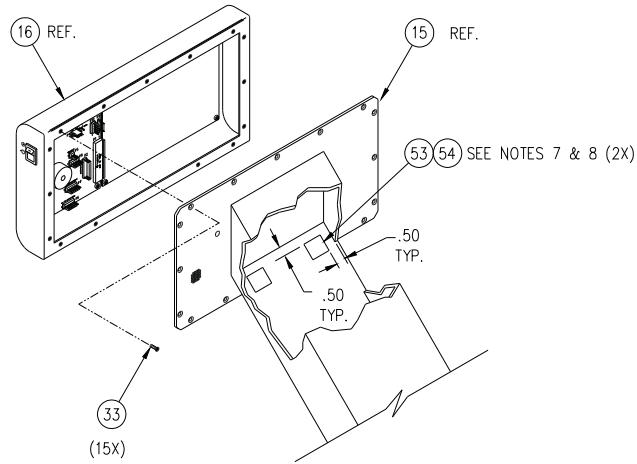
APPLICATION CHART			
ITEM NO.	P/N	SUB-ASSY. NO.	ASSY.
18	HM66H	AS147A	3150 MRI
16	HM66AR		
15	HM66AP		
18	HM78F	AS172	MAGNITUDE
16	HM78D		
15	HM78B		

55	HC01	1	CLAMP 1/4" NX2
54	HC07	5	CABLE TIE, #4 TY533M
53	H096	5	MOUNT, CABLE TIE, ADHESIVE BACKED
52	HS58	2	STANDOFF, HEX, F/F, #4-40 X .50
51	HM66BJ	1	COVER, SHIELD, XDCR PCB, 3150
50	HM66BH	1	MTG. BRKT., XDCR PCB, 3150
49	NW12N	1	WASHER, FLAT, #4 X .250 X .028, SS, NM
48	HC20	1	CABLE CLAMP, NYLON
47	NW11N	3	WASHER, FLAT, #6 X .312 X .048, SS, NM
46	NS10N	3	SCR, #6-32 X 3/8 LG., PHMS-XR, NM
45	HC21	2	CABLE CLAMP, NYLON, 1/2" DIA.
44	S015	1	SWITCH, ROCKER, 1803-1121
43	PA366	1	GASKET, EMI/RFI, 15 PIN CONNECTOR
42	N035	2	NUT, SELF-RETAINING, 1/4-20
41	N002N	7	NUT, HEX, #4-40, SS, NM
40	NW44N	8	WASHER, LOCK, SPLIT, #4 X .209 X .025, SS, NM
39	NW43N	5	WASHER, LOCK, SPLIT, #6 X .250 X .031, SS, NM
38	NS111N	6	SCR, #6-32 X 1/2 LG. FHMS-XR, NM, BLK
37	NS98N	16	SCR, #4-40 X 1/4 LG. FHMS-XR, NM
36	NS81N	2	SCR, #4-40 X 5/16" LG., FHMS-XR, NM
35	HS05	2	SPACER, NYLON, #4 X .25 O.D. X .156 LG.
34	NS26N	1	SCR, #4-40 X 3/8 LG., PHMS-XR, NM
33	NS19	15	SCR, #6-32 X 3/8 LG. FHMS-XR, SS
32	NS04N	11	SCR, #4-40 X 1/4 LG. PHMS-XR, SS, NM
31	NS02N	4	SCR, #6-32 X 1/4 LG. PHMS-XR, SS, NM
30	M050	A/R	ADHESIVE, LOCKTITE, 425, BLUE, ASSURE
29	M007	A/R	ADHESIVE, LOCTITE, 262, RED, THDLK.
28	L2095	1	SWITCHPAD, MEMBRANE, 3150/M
27	M161	10.00	TAPE, TRANSFER, CONDUCTIVE, .75 WD.
26	H110	108.00	GASKET, EMI, CHO-FOAM, .157W X .079H, PSA TAPE
25	H079	1	LATCH BLOCK, "D" CONN., .090 PNL.
24	HS62	4	STANDOFF, HEX, F/F, #6-32 X 1.50, ALUM.
23	HS61	1	STANDOFF, HEX, F/F, #4-40 X 1.50, ALUM.
22	HS42	2	STANDOFF, HEX, F/F, #4-40 X .50, NY
21	M092	2.00	TAPE, SHIELDING, COPPER, 1" WIDE
20	AP48	1	ASSY, CHECK VALVE, ETCO2, 3150
19	HP09	56.00	TUBING, SBR, .250 X .125 X .0625
18	SEE CHART	1	PANEL, SERVICE, 3150/M
17	HM66AW	2	BRACKET, LOCK, COLUMN, 3150
16	SEE CHART	1	PANEL, DISPLAY, 3150/M
15	SEE CHART	1	COLUMN, 3150/M
14	HE61	1	ANTENNA, 2.4 GHZ, RIGHT ANGLE
13	AS152A	1	ASSY, COLUMN INTRCNCT, 3150 (PLUG & PLAY)
12	AS150	1	ASSY, PATIENT PANEL, 3150
11	AS149	1	ASSY, ISO BD.S COVER, 3150
10	AS80B	1	ASSY, XDCR MOUNTING BD, 3150 MRI
9	AC345	1	CAB, ECG/PRESS. FILTER BOX (TOP), 3150
8	AC343	1	CAB, LCD DRIVE, 3150
7	AC341	1	CAB, KEYPAD/SPEAKER (TOP), 3150
6	AC337	1	CAB, ON-OFF/HV INVERTER (TOP), 3150
5	AC332	1	CAB, POWER & RADIO SERIAL I/O, 3150
4	AC331	1	CAB, ANTENNA, TELEMETRY, 8 IN.
3	AC319	1	CAB, ON/OFF SWITCH, INTRCNCT. BD, 3150
2	AB98B	1	PCA, LCD MODULE, 3150 MRI
1	AB75A	1	PCA, INTERCONNECT, 3150

ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:			
.XX = ±	DRAWN	SR	29FEB98
.XXX = ±	DESIGNED	RLM	16FEB98
ANGLES = ±	CHECKED		
	APPROVED		
DO NOT SCALE THIS DRAWING !!!			
THIRD ANGLE PROJECTION			
Invivo Research Inc.			
PRECISION BIOMEDICAL INSTRUMENTS			
Subsidiary of Invivo Corporation			
12601 RESEARCH PARKWAY., ORLANDO, FL 32826			
TITLE: ASSEMBLY: AS147A/AS172			
ASSY, COLUMN, 3150/M			
CAD SCALE:	SHEET:	DWG. NO.:	REV.:
1 : 1	1 of 2	194C794	H



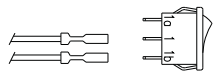
VIEW C



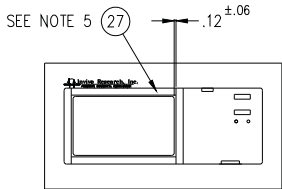
VIEW D

NOTES:

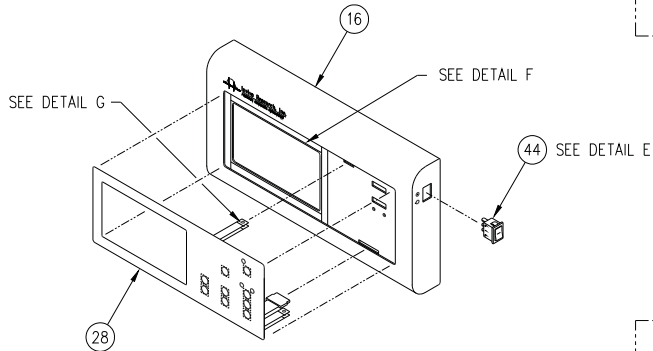
7. MOUNT TWO P/N H096 ADHESIVE BACKED CABLE TIE MOUNTS (ITEM 53) TO INSIDE SURFACE OF FRONT OF P/N HM66AP COLUMN (ITEM 15) AT APPROX. LOCATIONS SHOWN.
8. USE TWO P/N HC07 CABLE TIES (ITEM 54) TO SECURE DISPLAY PANEL CABLES.



DETAIL E
SCALE: 4 : 1



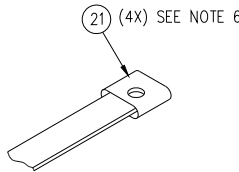
DETAIL F



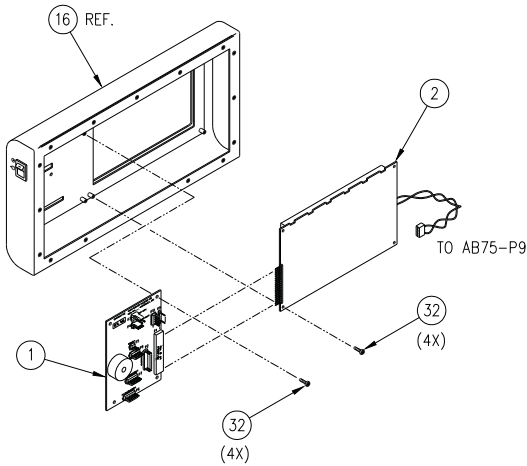
VIEW A

NOTES:

5. CUT P/N M161 TAPE (ITEM 27) TO .38 WIDE AND APPLY AROUND OUTSIDE PARAMETER OF RECESSED AREA IN P/N HM66AR DISPLAY PANEL (ITEM 16) WHERE P/N L2028 OVERLAY (ITEM 28) MOUNTS.
6. CUT P/N M092 COPPER TAPE (ITEM 21) TO .50 WIDE. APPLY ONE COMPLETE WRAP AROUND THE END OF EACH FLEX TAIL. PUNCH HOLE THRU TAPE.



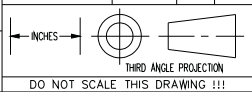
DETAIL G
SCALE: 4 : 1



VIEW B

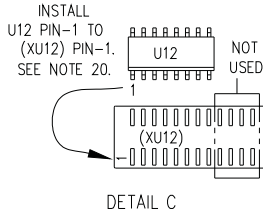
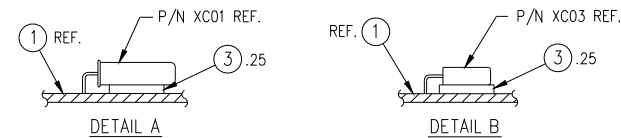
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UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:	DRAWN	SR	29FEB98
.XX = ± .02	DESIGNED	RLM	16FEB98
.XXX = ± .010	CHECKED		
ANGLES = ± 1°	APPROVED		



Invivo Research Inc. PRECISION BIOMEDICAL INSTRUMENTS Subsidiary of Invivo Corporation			
12601 RESEARCH PARKWAY., ORLANDO, FL 32826			
TITLE: ASSEMBLY: AS147A/AS172 ASSY, COLUMN, 3150/M			
CAD SCALE: 1 : 1	SHEET: 2 of 2	DWG. NO.: 194C794	REV: H

LF21 REV. A

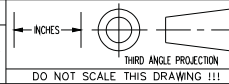


XU12	P039	1	SOCKET, 16 PIN, SUR. MOUNT SOIC TO DIP
Q4,7	Q001	2	MPS2907A, PNP
01,3	Q000	2	MPS2222A, NPN
U29	IC31	1	CLOCK, CALENDER, SERIAL I/O, 1990
U26	IC29	1	GATE, NAND, 8-INPUT, 74HC30
U23,24	IC104	2	IC, 1-OF-8 DCDR/DEMUX., 74ACT138
U20,21,22	IN26	3	I/O, PARALLEL, PROGRAMMABLE, CMOS
U15	IM07	1	SRAM, 32K X 8 BIT, 120 NS
U13	IC44	1	CD4538B, MONOSTABLE MV
U11	IC46	1	TRANSCEIVER, OCTAL, TRI-STATE, 74HC245
U9,10	IC45	2	BUFFER, OCTAL, TRI-STATE, 74HC244
U8	IL50	1	DUAL TIMER, LM555
U7	IC71	1	IC, MICROPROCESSOR, 8 BIT, 64P DIP, 10 MHZ
U6	IL16	1	AMP, AUDIO PWR, LM380N
U12	ICX114	1	IC, S016, HEX. BUFF. 3-ST. 74AHC367
U25,27,28	IC05	3	FLIP-FLOP, DUAL "D", 74HC74
U3	IC33	1	INVERTER, HEX, LOW PWR, 74HC04
U2	IC30	1	INVERTER, HEX-SCHMITT, 74HC14
U1	IC34	1	GATE, NAND, QUAD 2 INPUT, 74HC00
R114	RO51	1	RES, 10 OHM, .25W, 5%, CF
R111	RF76	1	RES, 6.19K, .125W, 1%, MF
R21,R41	RF54	2	RES, 3.3K, .125S, 1%, MF
R36	RF52	1	RES, 20K, .125S, 1%, MF
R29	RF181	1	RES, 33.2K, .125S, 1%, MF
R28	RF27	1	RES, 39.2K, .125W, 1%, MF
R25	RF115	1	RES, 332 OHM, .125W, 1%, MF
R42	RF04	1	RES, 6.81K, .125W, 1%, MF
R24	RF05	1	RES, 51.1K, .125W, 1%, MF
R20	RF03	1	RES, 12.1K, .125W, 1%, MF
R16	RI27	1	RES, 240 OHM, .25W, 5%, CF
R14,15,17	RS06	3	RES, 10K SIP, 10 PSTN, CF
R12	RO33	1	RES, 470 OHM, .25W, 5%, CF
R8	RF71	1	RES, 1.5K, .125W, 1%, MF

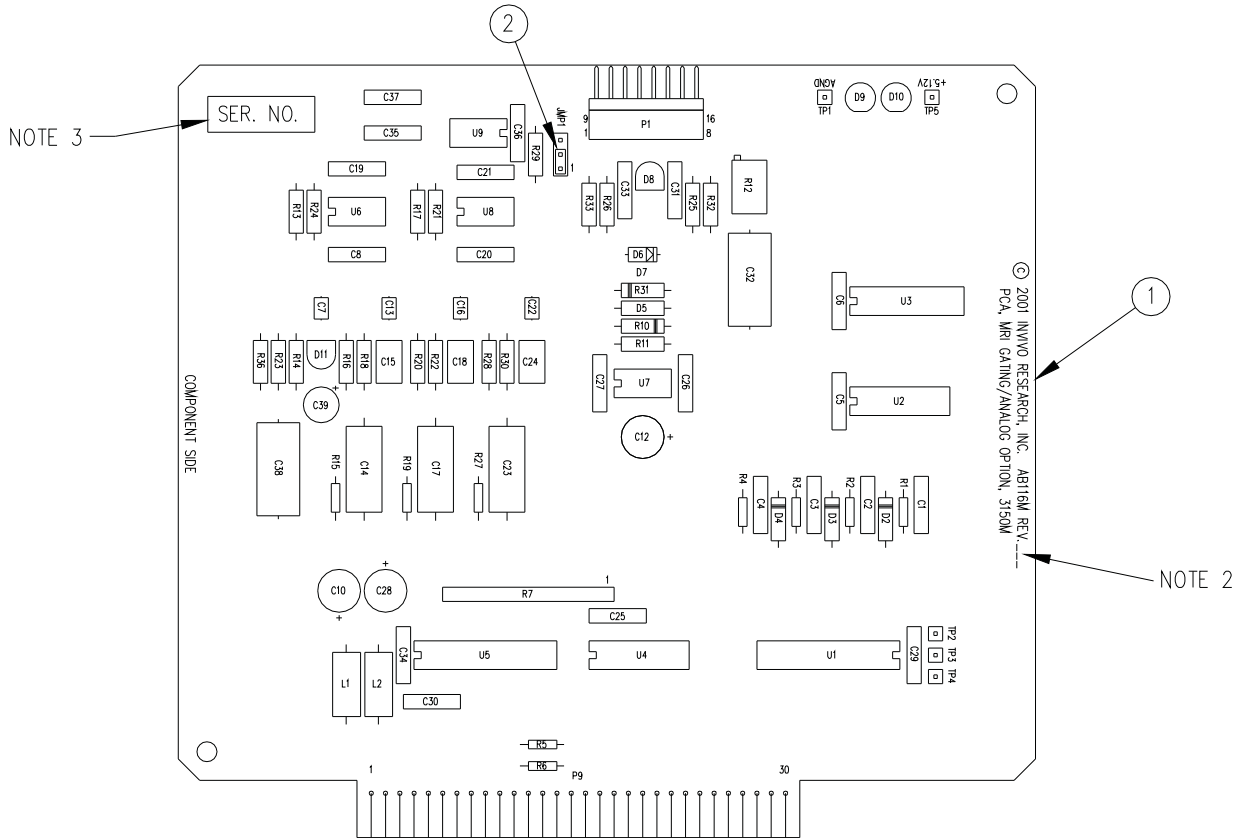
12. BOARD REQUIRES SERIALIZED LABELING WITH THE FOLLOWING INFORMATION:
UNIQUE SERIAL NO., ASSEMBLY P/N & CURRENT REV. LEVEL. PLACE SERIAL LABEL IN THIS AREA-ORIENT AS SHOWN.
13. COMPONENTS SHOWN AS SOLID ARE TO BE OMITTED.
14. INSTALL P/N W004 JUMPER WIRE ACROSS PADS AT REF. DES. C6.
15. INSTALL P/N W004A JUMPER WIRE, 12 LONG, ACROSS J1M1 AS SHOWN.
16. ON SOLDER SIDE OF BOARD, CUT TRACE BETWEEN E3-1 AND E3-3.
17. INSTALL P/N W004A JUMPER WIRE BETWEEN E3-1 AND J1-10 AS SHOWN.
18. ON P/N AB155 SOUND GENERATOR MODULE (REF. DES. U32), ENSURE JUMPER 1 IS INSTALLED AND REMOVE JUMPER 2.
19. ON THE SOLDER SIDE OF AB119A, INSERT THE AB155-U32 CONNECTOR INTO THE AB119A-U32 HOLES. ENSURING P2-1 IS MATED TO U32-1, SOLDER IN PLACE.
20. SOLDER P/N ICX114, IC, (REF. DES. U12) TO P/N P039, SOCKET (REF. DES. XU12), SOLDER THE ASSY. INTO (REF. DES. U12) AND VERIFY THE ORIENTATION IS CORRECT (SEE DETAIL C).

U32	AB155	1	PCA, SOUND GENERATOR MODULE	C33,34,116	CC00	3	CAP, 27pF, 10%, 100V, X7R, CERAMIC
3	M000	1.50	TAPE, OPN. CL. F.M, DS, .06 THK.x.38 WD.	C48	CT13	1	CAP, 10uF, 20%, 35V, TANT.
C22	CT12	1	CAP, .47uF, 10%, 35V, TANT.	C29,56,10	CT09	3	CAP, 1uF, 20%, 35V, TANT.
C6	W004	1	30 GAGE X 1" WIRE WRAP, PRE-CUT	C24,49,107	CC04	3	CAP, .01uF, 10%, X7R, 50V, CERAMIC
CT1	CT03	1	CAP, 33uF, 20%, 25V, TANT.	C21	CA06	1	CAP, 100uF, 20%, 16V, RADIAL, ALUM.
CR3	D006	1	DIODE, SCHOTTKY, MBR030/MBR040	C13,31,32,36,52 C117,118,119,120	CT01	9	CAP, 6.8uF, 20%, 16V, TANT.
2	T030	1	TRANSISTOR PAD, T018 CASE	C12,16	CA07	2	CAP, 220uF, 20%, 16V, ALUM. RADIAL
Y3	XC03	1	CRYSTAL, 32.768 MHZ	C100,101	CC01	2	CAP, 22pF, 10%, 25U, 200V, CERAMIC
U17	IM46	1	IC, EPROM, 32K X 8, 150NS, 29C256				
Y1	XC01	1	CRYSTAL, 18.432 MHZ				
J3	PA23	1	HEADER, UNSHR, SR, RA, 3 PIN, (.10)	106,108, 51,55,102,103 38,40-47,50			
R33	R022	1	RES, 20K, 5%, .25W, CF	30,34,35,37 23,25-28, 14,15,17,18,20, C1,2,4,5,8,19	CC12	36	CAP, .1uF, 20%, 50V, Z5U, CERAMIC
J2	PA177	1	HEADER, SHRD, SR, 9 PIN				
L1	T008	1	COIL, MOLDED, 100uH, 10%				
XU17,XU18,XU19	P001	3	SOCKET, 28 PIN, 2-640362-3				
CR1,2,4	D000	3	DIODE, SIGNAL, 1N4148	C3	CC08	1	CAP, 100pF, 10%, 50V, NPO, CERAMIC
Q6	Q016	1	TRANSISTOR,SD214,TO-72 PKG.	1	B106	1	PCB, MASTER PROCSSR REV. G
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION	ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION

			C	PER ECN #8499	JRH	26SEP0
			B	PER ECN #8191	JRS	14FEB0
			A	RELEASED, ECN #8182	CHY	2FEB0
			REV.	DESCRIPTION	BY	DATE
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REV.	DESCRIPTION	BY	DATE			



7. INSTALL P/N PA177 HEADER (REF. DES. J2) WITH KEY SLOTS FACING FINGERS, AS SHOWN.
8. APPLY .50 LG. PIECE OF P/N M000 TAPE (ITEM 3) TO P/NS CA07 AND CA06 CAPS (REF. DES. C16 & C21) IN A LAY DOWN POSITION.
9. BEND LEADS OF P/N CTO1 CAP TO FIT HOLE SPACING AT REF. DES. C36 AND INSTALL AS SHOWN.
10. LABEL BOARD WITH ASSEMBLY NO. AND CURRENT REV. LEVEL. PLACE LABEL OVER "AB30" SILKSCREEN.
11. ALL RESISTORS ARE 1% UNLESS OTHERWISE NOTED.



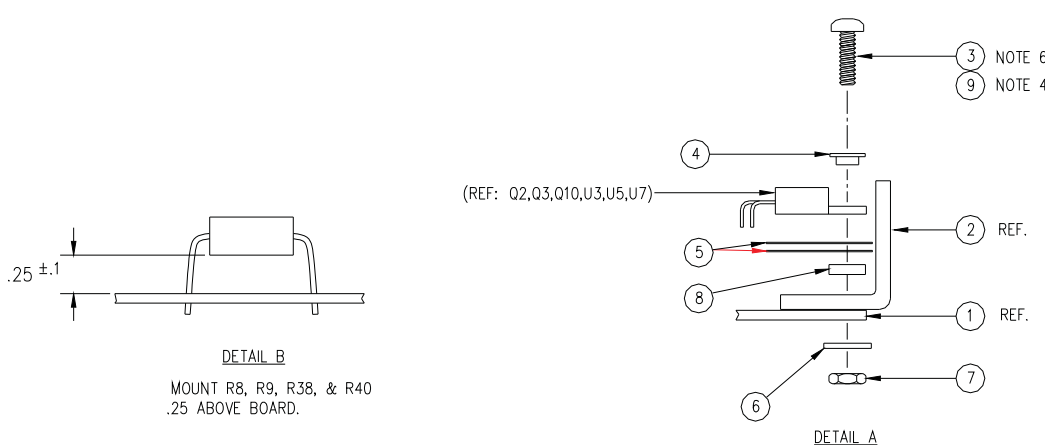
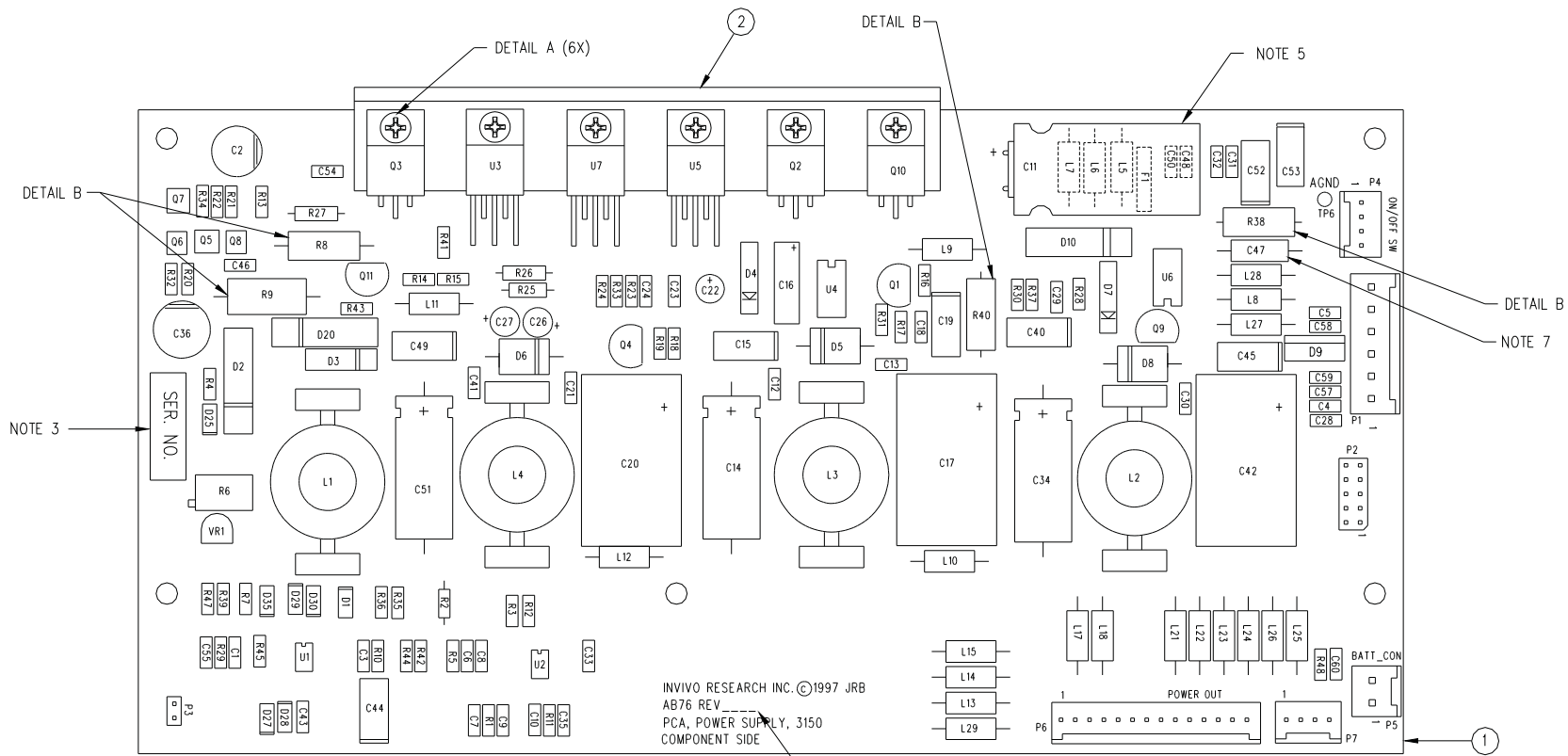
NOTES

1. WORKMANSHIP TO CONFORM TO IPC CLASS II REQUIREMENTS.
2. USING INDELIBLE INK IN CONTRASTING COLOR, PLACE CURRENT ASSEMBLY REV. IN SPACE PROVIDED.
3. BOARD REQUIRES SERIALIZED LABELING WITH THE FOLLOWING INFORMATION:
UNIQUE SERIAL NO., ASSEMBLY P/N & CURRENT REV. LEVEL.
PLACE SERIAL NUMBER LABEL IN THIS AREA-ORIENT AS SHOWN.

C	PER ECN #8374	JRB	17JUL01
B	PER ECN #8223	CHY	14MAR01
A	RELEASED, ECN #8105	SR	10NOV00
REV.	DESCRIPTION	BY	DATE
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R23	RF226	1	RES, 374K, .125W, .1%, MF
R36	RF112	1	RES, 1K, .125W, .1%, MF
C39	CT16	1	CAP., 10uF, 20%, 35V, TANT.
2	PA66	1	SHUNT, 2POS, .10 CTRS
L1,L2	T008	2	COIL, MOLDED 100uH, 10%
R7	RS05	1	RESNET, 10K, SIP, 11-POS/12-PIN, CF
R12	RP15	1	RES, 10K, POT, .5W, 10%, 20T
R11,R31	RF07	2	RES, 10K, .125W, 1%, MF
R15,19,27	RF03	3	RES, 12.1K, .125W, 1%, MF
R1-4	R163	4	RES, 120K, .25W, 5%, CF
R33	R084	1	RES, 2.7K, .25W, 5%, CF
R13,17,21,25,29	R046	5	RES, 100 OHM, .25W, 5%, CF
R32	R036	1	RES, 220 OHM, .25W, 5%, CF
R26	R022	1	RES, 20K, .25W, 5%, CF
R10	R017	1	RES, 2K, .25W, 5%, CF
R20,22,28,30 R14,16,18	R012	7	RES, 150K, .25W, 5%, CF
R5,6	R002	2	RES, 10K, .25W, 5%, CF
R24	R000	1	RES, 100K, .25W, 5%, CF
P1	PA371	1	CONN, 16P, DR, RA, UNSHRD, .100
JMP1	PA08	1	CONN, 3P, SR, HDR, ST, UNSHRD, .100
TP1-5	PA00	5	CONN, 1P, SR, HDR, ST, UNSHRD
D8,11	IR16	2	VOLTAGE REGULATOR, LM336Z-2.5V
U7	IL27	1	IC, DUAL JFET OP-AMP, LF412, DIP8
U6,8	IL06	2	OP AMP, DUAL, JFET, LF353
U9	IC101	1	IC, CMOS ANALOG SWITCH, SPDT
U5	IC73	1	IC, DAC, 8-BIT, 4-CHNL, 7226, DIP20
U4	IC34	1	IC, QUAD 2-IN/POS. NAND, 74HC00N
U2	IC30	1	IC, HEX-SCHM. TRGR. INVTR, 74HC14N
U1	IC21	1	IC, OCTAL "D" FLIP-FLOP, 74HC377
U3	I009	1	IC, 16P DIP, QUAD-DIFF, LINE DRVR
D9,10	DLO3	2	LED, RED, LL203R
D6	D008	1	DIODE, SCHOTTKY, 1 AMP, 40V
D2-5,7	D000	5	DIODE, SIGNAL, 1N4148
C10,12,28	CT01	3	CAP, 6.8uF, 20%, 16V, TANT.
C32,38	CP28	2	CAP, 1uF, 2%, 100V, POLY.
C15,18,24	CP23	3	CAP, .047uF, 5%, 50V, POLY.
C14,17,23	CP05	3	CAP, .33uF, 5%, 250V, AX, POLY.
C33-37 C25-27,29-31 C1-6,8,19-21	CC12	21	CAP, .1uF, 20%, 50V, Z5U, CER.
C7	CC05	1	CAP, .001uF, 10%, 50V, X7R, CER.
C13,16,22	CC04	3	CAP, .01uF, 10%, 50V, X7R, CER, AXL
1	B233	1	PCB, MRI GATING/ANALOG OPT., 3150M, REV. A
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE	DRAWN	SR	8NOV00
.XX = ±	DESIGNED	MC	1NOV00
.XXX = ±	CHECKED		
ANGLES = ±	APPROVED		
THIRD ANGLE PROJECTION			
DO NOT SCALE THIS DRAWING !!!			
INVIVO RESEARCH, INC. 12601 RESEARCH PARKWAY., ORLANDO, FL 32826			
TITLE: ASSEMBLY: AB116M PCA, MRI GATING/ANALOG OPT., 3150M			
CAD SCALE	SHEET	DWG. NO.	REV.
1 : 1	1 OF 1	194C893	C

3	PA66	9	SHUNT, 2 POSITION, .100 CTRS
2	H137	3	INSULATOR, CRYSTAL, MYLAR
XU10	P028	1	SOCKET, 20-PIN DIP, .300 CTR.
XU2	P029	1	SOCKET, 32-PIN DIP, .600 CTR.
XU1	PX00	1	SOCKET, 68 PIN PLCC SOLDER TAIL
X3	XC09	1	CRYSTAL, 3.57954 Mhz
X1,X2	XC16	2	CRYSTAL, 20.000 Mhz
R21	RX147	1	RES, 200 OHM, .125W, 1%, 100PPM, 1206
R1	RX110	1	RES, 680K, 5%, .25W, 200PPM, 1206
R4-11,28,29	RX42	11	RES, 100 OHM, 5%, .125W, 200PPM, 1206
R34,36-R40			
R22,23,26,33	RX40	15	RES, 10K, 5%, .125W, 200PPM, 1206
R2,3,12,14,20			
R27	RX23	1	RES, 1K, 5%, .125W, 200PPM, 1206
R25,30,31,32	RX21	4	RES, 20K, .125W, 5%, 200PPM, 1206
R15,24	RX19	2	RES, 2K, 5%, .125W, 200PPM, 1206
R18,19	RX00	2	RES, 100K, 5%, .125W
RP1-4	RS06	4	RESNET, 10K, SIP, 9-POS/10-PIN, CF
R16	RP25	1	RES, 200 OHM, POT, 68XR200
R17	RF87	1	RES, 499 OHM, .125W, 1%, MF
R13	R161	1	RES, 180 OHM, .5W, 5%, CF
Q2	Q018	1	TRANS, PWR FET DMOS, P-CH, VP1306
Q1,3	Q003	2	TRANS, FET, N-CHNL, TO-92, VN10KM
P3	PA272	1	CONN, 10P, SR, HDR, ST, SHRD, .098
P4	PA231	1	CONN, 13P, SR, HDR, ST, SHRD, .098
JP1,10	PA37	2	HEADER, UNSH, DR, 10 PIN, .100
JP2,3,5,6	PA49	4	HEADER, 2P, UNSH., SR, .100
JP7	PA08	1	CONN, 3P, SR, HDR, ST, UNSHRD, .100
TP1,2	PA00	2	CONN, 1P, SR, HDR, ST, UNSHRD, (.10)
U24	IR40	1	REGULATOR, NEGATIVE LM320LZ-5
U6	IR09	1	REGULATOR, POSITIVE LM317LZ
U1	INX03	1	MPU, 10 MHZ, 68P, PLCC68, 64180
U4,5,18	INX02	3	I/O, PARALLEL, 8255, CMOS, 44PLCC
U26	IMX07A	1	DIGITAL SIGNAL PRCSR., DSP56002, 66MHZ
U3,7,8,9	IMX06A	4	IC, SRAM, 28P-SOJ, AS7C256, 10NS
U21	ILX06	1	IC, 16P, MLTPLX, CMOS ANALOG, C-CH.
U11	ICX24	1	IC, QUAD 2-INPUT NAND, 74HC00M
U14,15,22	ICX11	3	DECODER, 1 OF 8, S016, 74HC138
U13,16	ICX10	2	FLIP-FLOP, DUAL "D" S014, 74HC74
U12	ICX05	1	INVERTER, HEX, S014, 74HC04
U19	ICX04	1	FLIP-FLOP, OCTAL, "D", 74HC273
U20	IC88	1	IC, A-D CNV. 12BIT, ADC12451
D7-10,12,13	DDX05	6	DIODE, SCHOTTKY, 1N5711, LEADLESS
D2,3,4	DDX01	3	DIODE, SIGNAL, LEADLESS, 500mW
D1	DD020	1	DIODE, SCHOTTKY, SB160, 60V, 1A, D015
C15-22,31,34	CXT02	10	CAP, 6.8uF, 20%, 35V, 7343, TANT.
C45	CX39	1	CAP,8.2nF, 10% 50V, X7R, 1206
C4,8	CX28	2	CAP,.015uF, 5%, 50V, X7R, 1206, CER.
C35	CX26	1	CAP, 68pF, 5%, X7R, 50V, 1206, CER.
C1,2,32,33	CX25	4	CAP, 22pF, 5%, 50V, X7R, 1206, CER.
C39-44,46-71			
C23-30,37	CX22	46	CAP, .1uF, 10%, 50V, X7R, 1206, CER.
C5,7,12-14			
C36	CX15	1	CAP, 27pF, 10%, 50V, COG, 1206, CER.
C38	CX11	1	CAP, .01uF, 10%, 50V, X7R, 1206, CER.
1	B123	1	PCB, DSP SIGNAL PRCSR, 3150/3250, REV. C
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE: XX.XX = ± XXX = ± XXXX = ± ANGLES = ±	DRAWN JRB	8/59P97	 Invivo Research Inc. PRECISION BIOMEDICAL INSTRUMENTS Subsidiary of Invivo Corporation 12601 RESEARCH PARKWAY, ORLANDO, FL 32826 TEL: ASSEMBLY: AB47 PCA, DSP SIGNAL PRCSR, 3150/3250
	DESIGNED JJB	6/92	
	CHECKED		
	APPROVED		
 THIRD ANGLE PROJECTION			
DO NOT SCALE THIS DRAWING !!!		CAD SCALE	SHEET
		2 : 1	1 OF 1
		DWG. NO.	194D579
		REV.	H



- NOTES
- WORKMANSHIP TO CONFORM TO IPC CLASS II REQUIREMENTS.
 - USING INDELIBLE INK IN CONTRASTING COLOR, PLACE CURRENT ASSEMBLY REV. IN SPACE PROVIDED.
 - BOARD REQUIRES SERIALIZED LABELING WITH THE FOLLOWING INFORMATION:
UNIQUE SERIAL NO., ASSEMBLY P/N & CURRENT REV. LEVEL.
PLACE SERIAL NUMBER LABEL IN THIS AREA-ORIENT AS SHOWN.
 - ADD LOCTITE 425 (M050) AS REQUIRED, TO SCREW THREADS BEFORE INSTALLING SCREW.
 - ADD RTV 732 CLEAR ADHESIVE (M008A) TO SECURE C11, C17, C20 AND C42 TO THE BOARD.
 - TORQUE P/N NS26N SCREW (ITEM 3) TO 4.5 ±0.5 IN. LBS. AT Q2, Q3, Q10, U3, U5, AND U7 LOCATIONS.
 - HAND SOLDER C47. DO NOT VAPOR DEGREASE BOARD WITH C47 COMPONENT ASSEMBLED.
HAND CLEAN ONLY AFTER SOLDERING.

REF.	M008A	A/R	ADHESIVE/SEALANT, RTV, CLEAR, 732
REF.	M050	A/R	ADHESIVE, LOCTITE 425, BLUE ASSURE
8	NW16	6	WASHER, NYLON, #4 X .250 X .062
7	N002N	6	NUT, HEX, #4-40, SS, NM
6	NW02	6	WASHER, NYLON, #6 X .312 X .032
5	HI01	12	INSULATOR, THERMALLY CONDUCTIVE
4	HI03	6	BUSHING, SHLDR, NYLON, .120 O.D.
3	NS26N	6	SCR, #4-40 X 3/8 LG. PHMS-XR, NM
2	HM66X	1	HEAT SINK, PWR SPLY PCB, 3150
L1-4	TO62	4	INDUCTOR, AIR CORE, 50uH, 10%
L21-29	TO60	22	BEAD, .350 FERRITE, LEADED, 22AWG
L5-15,17,18			
R8	R192	1	RES, 5.1 OHM, 1W, 5%, MET.OX.
R27	R110	1	RES, 150 OHM, .5W, 5%, CF
R9	R086A	1	RES, .56 OHM, 2W, 5%, MF
R38,40	R055	2	RES, 0.1 OHM, 1W, 5%, MO
R30	RX92	1	RES, 1.2K, .125W, 5%, 200PPM, 1206
R14	RX90	1	RES, 120 OHM, .125W, 5%, 200PPM, 1206
R7,48	RX83	2	RES, 1K, .125W, 1%, 1206
R42	RX73	1	RES, 158K, .125W, 1%, 1206
R5	RX67	1	RES, 2K, .125W, 1%, 1206
R13	RX60	1	RES, 750 OHM, .125W, 1%, 1206
R11,41,43,44,47	RX57	5	RES, 10K, .125W, 1%, 100PPM, 1206
R39	RX54	1	RES, 240 OHM, .125W, 5%, 200PPM, 1206
R17	RX52	1	RES, 8.2K, .125W, 5%, 200PPM, 1206
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION

C	PER ECN #6559	JWT	29MAY98
B	PER ECN #6282	CHY	12FEB98
A	RELEASED, ECN #5831	JRB	18AUG97
O	PROTOTYPE RELEASE	JRB	6FEB97
REV.	DESCRIPTION	BY	DATE

E	PER ECN #6896	SLC	06MAR99
D	PER ECN #6995	CHY	29JAN99
REV.	DESCRIPTION	BY	DATE

R1	RX51	1	RES, 511K, .125W, 1%, 200PPM, 1206
R45	RX46	1	RES, 1.2M, .125W, 5%, 200PPM, 1206
R10	RX42	1	RES, 100 OHM, 5%, .25W, 200PPM, 1206
R32	RX21	1	RES, 20K, .125W, 5%, 200PPM, 1206
R31	RX208	1	RES, 953 OHM, .25W, 1%, 100PPM, 1206
R33	RX207	1	RES, 8.45K, .25W, 1%, 100PPM, 1206
R37	RX206	1	RES, 3.6K, .25W, 5%, 100PPM, 1206
R23	RX204	1	RES, 909 OHM, .25W, 1%, 100PPM, 1206
R21,34	RX20	2	RES, 470 OHM, .125W, 5%, 200PPM, 1206
R22	RX178	1	RES, 324 OHM, .125W, 1%, 100PPM, 1206
R4	RX142	1	RES, 3.01K, .125W, 1%, 100PPM, 1206
R29	RX140	1	RES, 12.1K, .125W, 1%, 100PPM, 1206
R15	RX136	1	RES, 825 OHM, .125W, 1%, 100PPM, 1206
R3,12	RX115	2	RES, 5.11K, .125W, 1%, 100PPM, 1206
R16,18-20,24,28	RX02	6	RES, 1K, .125W, 5%, 1206
R35,36	RX01	2	RES, 1M, .125W, 5%, 1206
R6	RP26	1	RES, 2K POT, .5W, 10%, 20T, CER.
R26	RF39	1	RES, 1.24K, .25W, 1%, MF
R2	RF22	1	RES, 619K, .125W, 1%, MF
R25	RF172	1	RES, 7.5K, .125W, 1%, MF
Q2,10	Q057	2	TRANS, PWR FET, P-CH, .15 OHM, 50V
Q4	Q028	1	2N3906, PNP, TO-92 PACKAGE
Q3	Q026	1	D44H11 NPN SILICON POWER PAK
Q1,9	Q020	2	XSTR, TO-92, 2N3904
Q11	Q003	1	TRANS, FET, N-CHNL, TO-92, VN10KM
Q6,8	QX01	2	TRANS, PNP, SILI, S023, TYPE 2907A
Q5,7	QX00	2	TRANS, NPN, SILI, S023, TYPE 2222
P3	PA49	1	HEADR, UNSH, SR, 2 PIN (.10)
P2	PA37	1	HEADER, UNSH, DR, 10 PIN (.10)
P1	PA343	1	CONN, 6P, SR, HDR, ST, LCK, .156 CTR
P5	PA253	1	HEADER, FRTN LCK, SR, 2P, .156 CTR
P6	PA337	1	CONN, 14P, SR, HDR, ST, LCK, .100 CTR.
P4,7	PA344	1	CONN, 4P SR, HDR, ST, LCK, .100 CTR
TP6	PA00	1	CONN, 1P, SR, HDR, ST, UNSHRD, (.10)
U7	IR59	1	REGULATOR, H.W. SW, ADJUST, 1070
U5,3	IR55	2	REGULATOR, ADJUST, LW DR LM2941C
VR1	IR09	1	VREG, POS., LM317LZ, T092
U4,6	IR04	2	CONVERTER, DC TO DC MC3406AP1
U2	ILX11	1	IC, DUAL OP AMP, SINGLE S., LM393
U1	ILX01	1	IC, OP AMP, DUAL, BIFET, LF353D
D9	D030	1	DIODE, RECTIFIER, SCHOTTKY, 7.5A,45V
F1	FU14	1	FUSE, 5 AMP, PICO
D5,6,8	D031	3	DIODE, SCHOTTKY, RECT., 3.0A, 90V
D4,7	D023	2	DIODE, GENERAL PURPOSE, 1N4007
D2,20	D021	2	DIODE, SCHOTTKY, SB350, ERC-81004
D3	D015	1	DIODE, RECTIFIER, 1N4935, 200V
D10	D014	1	DIODE, SCHOTTKY, RECT., 40V, 3A
D1,25,27-30,35	DDX01	7	DIODE, SIGNAL, LEADLESS, 500mW
C46	CX23	1	CAP, 1500pF, 5%, 50V, NPO, 1206, CER.
C9,10,35	CX13	3	CAP, .001uF, 10%, 50V, X7R, 1206, CER.
C48,50,54-60			
C28-32,33,41,43	CX22	29	CAP, .1uF, 10%, 50V, X7R, 1206, CER.
C18,21,23,24			
C1,3-8,12,13			
C45,49,52,53	CXT05	8	CAP, 10uF, 20%, 35V, 7343, TANT.
C15,19,40,44			
C47	CP20	1	CAP, 1000pF, 5%, 30V, AX, POLY.
C16	CC35	1	CAP, 2000pF, 10%, 1KV, X5F, CER.
C2	CA32	1	CAP, 100uF, 20%, 25V, MIN. AL, RAD.
C26,27	CA24	2	CAP, 1uF, 20%, 50V, AL
C11	CA18	1	CAP, 2200uF, 20%, 35V, AL
C17,20,42	CA17	3	CAP, 1000uF, 20%, 35V, ALUM
C36	CA15	1	CAP, 220uF, 20%, 35VDC, AL, RADIAL
C22	CA08	1	CAP, 22uF, 20%, 50V, AL
C14,34,51	CA04	3	CAP, 100uF, -10% +50%, 63V, AL
1	B155	1	PCB, POWER SUPPLY, 3150, REV.B
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION

INCHES

THIRD ANGLE PROJECTION

DO NOT SCALE THIS DRAWING !!!

DRWN

JRB

06FEB97

DESIGNED

CN

01JAN97

CHECKED

APPROVED

ASSEMBLY: AB76

PCA, POWER SUPPLY, 3150

CAD SCALE

SHEET

DWG NO.

REV.

2 : 1

1 OF 1

194D659

E

Invivo Research Inc.

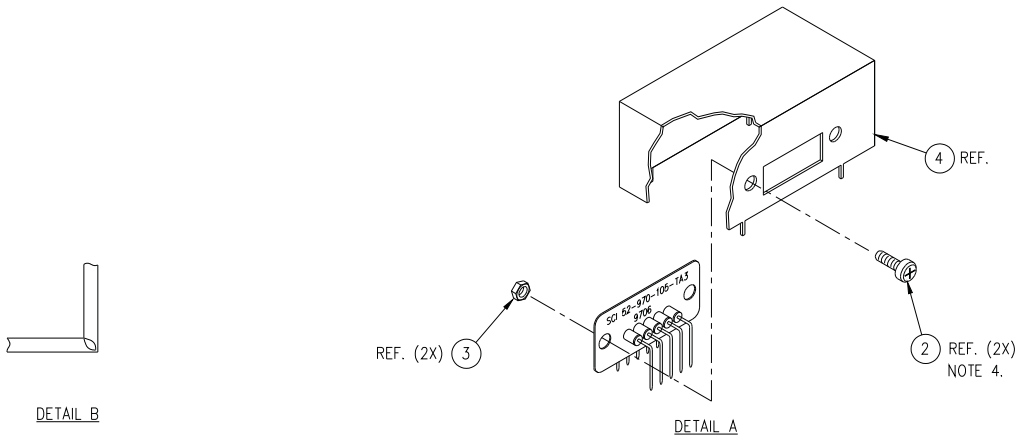
PRECISION BIOMEDICAL INSTRUMENTS

12601 RESEARCH PARKWAY., ORLANDO, FL 32826

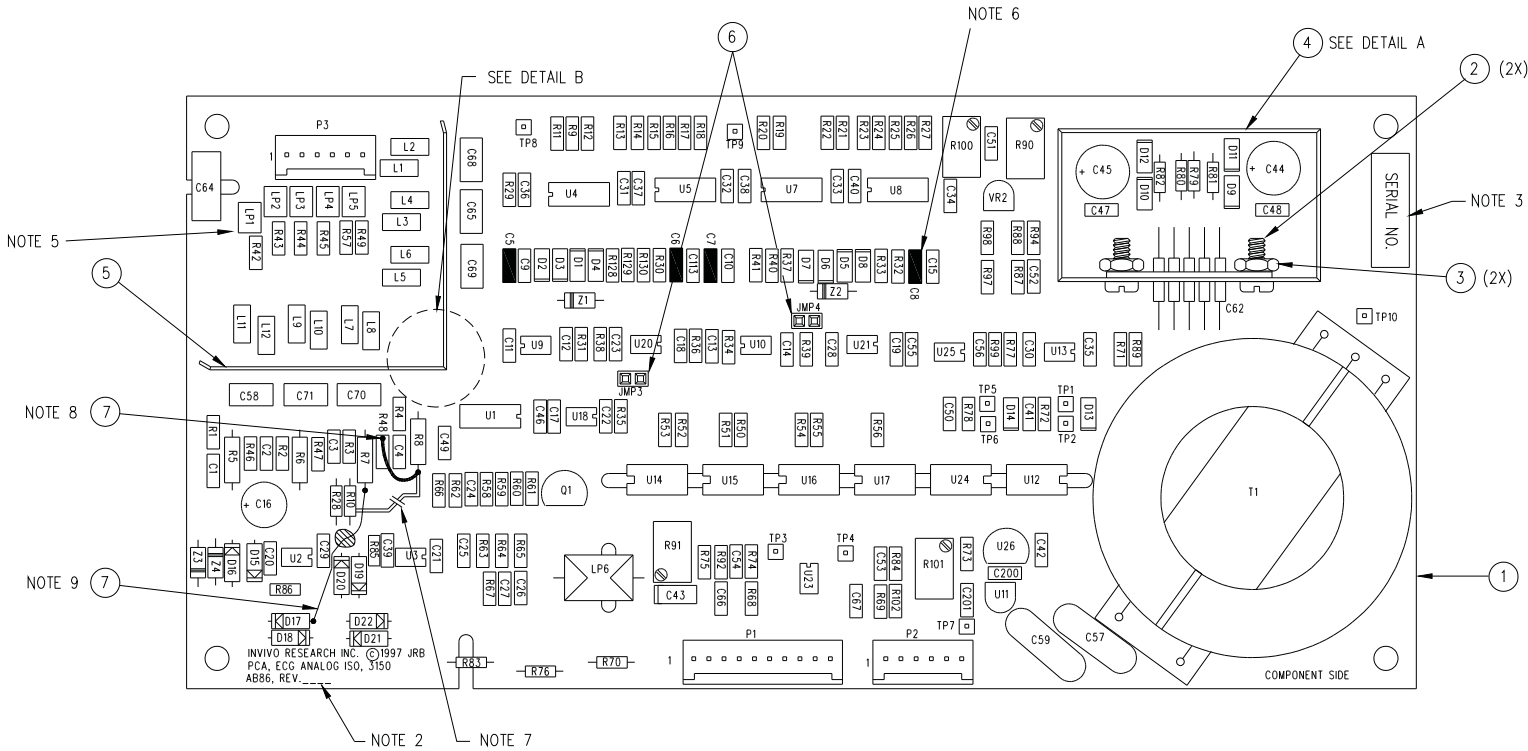
TITLE

ASSEMBLY: AB76

PCA, POWER SUPPLY, 3150



7	W004A	1.75	30 GAGE WIRE WRAP/ROLL
R47	RX111	1	RES, 47.5K, 1%, .125W, 100PPM, 1206
R46	RX34	1	RES, 121K, 1%, .125W, 200PPM, 1206
REF.	M050	A/R	ADHESIVE, LOCTITE 425, BLUE, ASSURE
T1	T065	1	TRANSFORMER, AIR-CORE, 680uH
L1-12	TX07	12	INDUCTOR, 8.2uH, 5%, SURF, COIL, 1210
R70,76,83	R185	3	RES, 22 MEG, .5W, 5%, CC
R66	RX179	1	RES, 2.7K, 5%, .125W, 200PPM, 1206
R5-8	R186	4	RES, 100 MEG, .25W, 5%, CF
R79,80,81,82	R009	4	RES, 22 OHM, .25W, 5%, CF
R29,30,32,33	RX93	4	RES, 3.3K, .125W, 200PPM, 1206
R75	RX83	1	RES, 1K, .125W, 1%, 1206
R65	RX73	1	RES, 158K, .125W, 1%, 1206
R35,36,38,39	RX70	4	RES, 10 OHM, .125W, 5%, 200 PPM, 1206
R58,60,61	RX68	3	RES, 32.4K, .125W, 1%, 1206
R1-4,42-45,57	RX65	9	RES, 27.4K, .125W, 1%, 1206
R72,78	RX63	2	RES, 510 OHM, .125W, 5%, 100PPM, 1206
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION



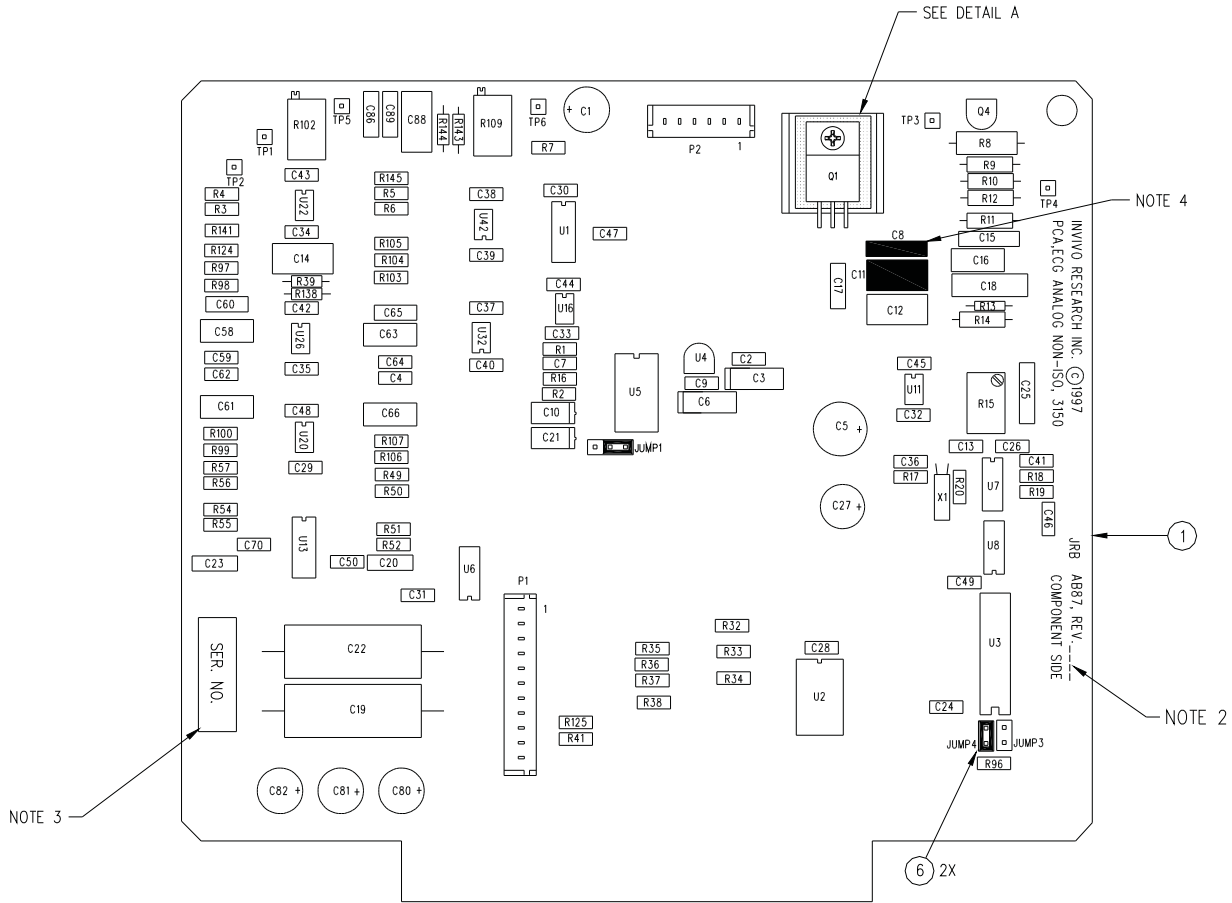
NOTES

- WORKMANSHIP TO CONFORM TO IPC CLASS II REQUIREMENTS.
- USING INDELIBLE INK IN CONTRASTING COLOR, PLACE CURRENT ASSEMBLY REV. IN SPACE PROVIDED.
- BOARD REQUIRES SERIALIZED LABELING WITH THE FOLLOWING INFORMATION:
UNIQUE SERIAL NO., ASSEMBLY P/N & CURRENT REV. LEVEL.
PLACE SERIAL NUMBER LABEL IN THIS AREA-ORIENT AS SHOWN.
- ADD P/N M050, LOCTITE 425 TO ALL SCREW THREADS.
- ADD RTV 732 CLEAR ADHESIVE (M008A) TO SECURE LP1-LP5 TO THE BOARD.
- ITEMS SHOWN AS SOLIDS ARE TO BE OMITTED.
- CUT TRACE BETWEEN R10 AND R66 AS SHOWN.
- ITEM "R48" TO BE OMITTED, THEN CONNECT P/N W004A JUMPER WIRE (ITEM 7) FROM R48 (SIDE CLOSEST TO C70) TO R8 (SIDE CLOSEST TO R66).
- CONNECT P/N W004A JUMPER WIRE FROM D17, ANODE SIDE TO R7 (CLOSEST TO R10). USE M107 TAK PAK TO SECURE WIRE.

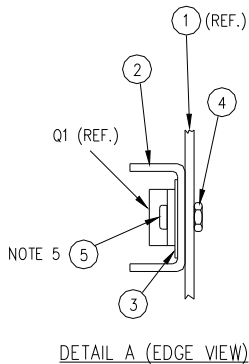
L	PER ECN #8328	CHY	11JUN01	D	PER ECN #6750	CHY	12AUG98
K	PER ECN #8239	SR	9MAR01	C	PER ECN #6591	JWT	04JUN98
J	PER ECN #8109	JRH	07DEC00	B	PER ECN #6532	CHY	16APR98
H	PER ECN #7759	SLC	02MAY00	A	PER ECN #6283M	JRB	2MAR.98
G	PER ECN #7158	JWT	10MAY99	REV.	RELEASED, ECN #5815	JRB	15AUG97
F	PER ECN #6867	CHY	30SEP98	REV.	DESCRIPTION	BY	DATE
REV.	DESCRIPTION	BY	DATE	THIS DOCUMENT IS CONFIDENTIAL AND PROPRIETARY AND IS THE SOLE PROPERTY OF INVIVO RESEARCH INCORPORATED (IRI). IT IS NOT TO BE DISCLOSED TO ANY PARTY, REPRODUCED OR USED IN ANY OTHER MANNER WITHOUT WRITTEN CONSENT OF SAID COMPANY. INVIVO MAINTAINS THE RIGHT TO CHANGE SPECIFICATIONS AT ANY TIME WITHOUT PRIOR NOTICE.			

R87,97	RX58	2	RES, 20K, .125W, 1%, 200V, 100PPM
R34,88,98	RX57	23	RES, 10K, .125W, 1%, 100PPM, 1206
R9,11-27, 85,86	RX50	8	RES, 22K, .125W, 5%, 200PPM, 1206
R50-56,67	RX26	2	RES, 10M, .125W, 5%, 200PPM, 1206
R40,129	RX17	6	RES, 100K, .125W, 1%, 200PPM, 1206
R77,84,89, 99,71,74	RX163	4	RES, 100 OHM, .125W, 1%, 100PPM, 1206
R41,68,69,130	RX161	1	RES, 1.5K, .125W, 5%, 200PPM, 1206
R94	RX159	2	RES, 39K, .125W, 5%, 200PPM, 1206
R92,102	RX118	1	RES, 174K, .125W, 1%, 200V, 1206
R64	RX117	1	RES, 66.5 OHM, .125W, 1%, 200V, 1206
R63	RX115	1	RES, 5.11K, .125W, 1%, 100PPM, 1206
R73	RX140	1	RES, 12.1K, .125W, 1%, 100PPM, 1206
R31	RX08	3	RES, 4.7K, .125W, 5%, 1206
R37,62,128	RX02	1	RES, 1K, .125W, 5%, 1206
R49	RX01	1	RES, 1M, .125W, 5%, 1206
R59	RP67	2	RES, 100K, POT, .5W, 10%, 20T, CER
R91,101	RP63	2	RES, 50K POT, .5W, 10%, 20T, TRIM
R90,100	RF75	1	RES, 1M, .125W, 1%, MF
R10	RF184	1	RES, 243K, .125W, 1%, MF
R28	Q003	1	TRANS, FET, N-CHNL, TO-92, VN10KM
Q1	PA66	2	SHUNT, 2 POSITION, .10 CTRS.
6	PA49	2	HEADER, UNSH, SR, 2PIN (.10)
JMP3,4	PA341	2	CONN, 6P, SR, HDR, ST, UNSHRD, (.10)
P2,P3	PA306	1	CON, 10P, SR, HDR, ST, LCKG, .100
P1	PA00	10	CONN, 1P, SR, HDR, ST, UNSHRD, (.10)
TP1-10	N002N	2	NUT, #4-40 HES-SS, NM
3	NS04N	2	SCR, #4-40 X 1/4 LG. PHMS-XR, NM
2	IR58	2	VOLT. REF. PRECISN MICROPWR SHNT
VR2,U26	IR41	1	REGULATOR, POSITIVE LM340LAZ-5
U11	IL64	2	IC, LINEAR OPTOCPLR, 8 PIN DIP, IL300
U12,24	IL24	4	ISOLATR, OPTO, DUAL CHANNEL
U14-17	ILX16	2	IC, INSTR. AMPLIFIER, AD620BR
U9,10	ILX09	2	IC, DUAL OP AMP, LO-V, LM358
U13,25	ILX07	4	IC, OP AMP, DUAL, JFET, MC33182
U18,20,21,23	ILX06	5	IC, 8CH, ANA. CMOS MUX DG508ADY
U1,4,5,7,8	ILX01	2	IC, OP AMP, DUAL, BIFET, LF353D
U2,3	HM51P	1	SHIELD, FRONT END, ECG ISO, 3150
5	HM51M	1	SHIELD, ECG/PRESS, ISO, 3150
4	D004	8	DIODE, LOW LEAKAGE, 1N458A
D15-22	DZ04	4	ZENER, 1N753A, 6.2V, 5%, 500mW
Z1-4	DS06	5	SURGE-ARRESTOR, 140V, 15%
LP1-5	DS08	1	SURGE-ARRESTOR, 4.0KV-6.0KV
LP6	DDX11	4	DIODE, SCHTTKY, BARRIER, 50V, BAS86
D9-12	DDX01	10	DIODE, SIGNAL, LEADLESS, 500mW
D1-8,13,14	CX44	1	CAP, .33uF, +80%-20%, Y5U, 50V, 1206
C201	CX43	6	CAP, .270 PF, 5%, 2KV, NPO, 1812, CER.
C70,71	CX38	1	CAP, .01uF, 20%, 100V, Z5U, 1206, CER.
C58,65,68,69	CC69	1	CAP, 180pF, 10%, 3KV, Y5P, CER.
C200	CX24	2	CAP, 560pF, 5%, 50V, NPO, 1206, CER.
C64	CX23	1	CAP, 1500PF, 5%, 50V, NPO, 1206, CER.
C53,54	CX22	40	CAP, .1uF, 10%, 50V, X7R, 1206, CER.
C24	CX19	4	CAP, 270pF, 5%, 50V, X7R, 1206, CER.
C56,66,67,113	CX18	2	CAP, 47pF, 5%, 50V, X7R, 1206, CER.
C51,52,55	CX17	2	CAP, .001uF, 5%, 50V, C0G, 1210, CER.
C25-40,42,46-49	CXT04	1	CAP, 1uF, 20%, 35V, 6032, TANT.
C11-15,17-23	CT22	2	CAP, 33uF, 10%, 35V, TANT.
C1-4	CT09	1	CAP, 1uF, 20%, 35V, TANT.
C41,50	CF14	1	FILTER PLATE, 5000 PF, 5 POS, BOLT-IN
C9,10	CC23	1	CAP, .0047 uF, 20%, 3KV, RAD. CER.
C43	CC20	1	CAP, 1500PF, 20%, 3KV, 25V, CER.
C44,45	B158	1	PCB, ECG ANALOG ISO, 3150, REV. C
C16			
C62			
C59			
C57			
1			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:	DRAWN	JRB	27JUN97
.XX = ±	DESIGNED	CN	19SEP95
.XXX = ±	CHECKED		
ANGLES = ±	APPROVED		
INCHES			
THIRD ANGLE PROJECTION			
DO NOT SCALE THIS DRAWING !!!			
Invivo Research Inc. PRECISION BIOMEDICAL INSTRUMENTS Subsidiary of Invivo Corporation			
12601 RESEARCH PARKWAY, ORLANDO, FL 32826			
TITLE: ASSEMBLY: AB86 PCA, ECG ANALOG ISO, 3150			
CAD SCALE	SHEET	DWG. NO.	REV.
2 : 1	1 OF 1	194D672	L

REF.	M050	A/R	ADHESIVE, LOCTITE 425, BLUE ASSURE
6	PA66	2	SHUNT, 2 POS, .10 CTRS.
5	NS04N	1	SCR, #4-40 X 1/4 LG. PHMS-XR, NM
4	N002N	1	NUT, HEX, #4-40, SS, NM
3	HI01	1	INSULATOR, THERMALLY CONDUCTIVE
2	HQ02	1	HEATSINK, LOW PROFILE, T05/220
X1	XC22	1	CRYSTAL, 40 KHZ, C-2 TYPE
R8	R157	1	RES, 1.2 OHM, .5W, 5%, CF
R9	R144	1	RES, 68 OHM, .25W, CF
R11	R051	1	RES, 10 OHM, .25W, 5%, CF
R14	R022	1	RES, 20K, .25W, 5%, CF
R13	R005	1	RES, 1.5M, .25W, 5%, CF
R12	R003	1	RES, 5.1K, .25W, 5%, CF
R10	R001	1	RES, 1K, .25W, 5%, CF
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION



- NOTES
- WORKMANSHIP TO CONFORM TO IPC CLASS II REQUIREMENTS.
 - USING INDELIBLE INK IN CONTRASTING COLOR, PLACE CURRENT ASSEMBLY REV. IN SPACE PROVIDED.
 - BOARD REQUIRES SERIALIZED LABELING WITH THE FOLLOWING INFORMATION:
UNIQUE SERIAL NO., ASSEMBLY P/N & CURRENT REV. LEVEL.
PLACE SERIAL NUMBER LABEL IN THIS AREA-ORIENT AS SHOWN.
 - ITEMS SHOWN AS SOLIDS ARE TO BE OMITTED.
 - ADD P/N M050, LOCTITE 425 TO ALL SCREW THREADS.



R7,41,125	RX83	3	RES, 1K, .125W, 1%, 1206
R4,6	RX81	2	RES, 52.3K, .125W, 1%, 1206
R3,5	RX80	2	RES, 17.4K, .125W, 1%, 1206
R32-38,96	RX78	8	RES, 1.21K, .125W, 1%, 100PPM, 1206
R50,55	RX75	2	RES, 51.1K, .125W, 1%, 100PPM, 1206
R141,145	RX58	2	RES, 20K, .125W, 1%, 200V, 100PPM
R16	RX42	1	RES, 100 OHM, 5%, 25W, 200PPM, 1206
R1	RX41	1	RES, 200 OHM, .125W, 5%, 200PPM, 1206
R52,57	RX202	2	RES, 475K, .125W, 1%, 100PPM, 1206
R51,56	RX172	2	RES, 4.32K, .125W, 1%, 100PPM, 1206
R20	RX168	1	RES, 499K, .125W, 1%, 100PPM, 1206
R2	RX148	1	RES, 33.2K, .125W, 1%, 100PPM, 1206
R103-105,124	RX126	6	RES, 56.2K, .125W, 1%, 100PPM, 1206
R97,98			
R17	RX124	1	RES, 22M, .125W, 5%, 200PPM, 1206
R49,54	RX112	2	RES, 1.07M, .125W, 1%, 200PPM, 1206
R99,100,106,107	RX111	4	RES, 47.5K, .125W, 1%, 100PPM, 1206
R18,19	RX02	2	RES, 1K, .125W, 5%, 1206
R15	RP74	1	RES, 200K, POT, .5W, 10%, 24T, CER.
R102,109	RP27	2	RES, 20K, POT, 68XR20K
R138,139,143,144	RF29	4	RES, 41.2K, .125W, 1%, MF
Q1	Q026	1	D44H11 NPN SILICON POWER PAK
Q4	Q020	1	TRANSISTOR, T0-29, 2N3904, NPN
JUMP3, JUMP4	PA49	2	HEADER, UNSH, SR, RA, 2 PIN (.10)
P2	PA192	1	CONN, 6P, SR, HDR, ST, .098 CTRS
P1	PA232	1	HEADER, SHRD, SR, 11 PIN, .098
JUMP1	PA08	1	CONN, 3P, SR, HDR, ST, UNSHRS, (.10)
TP1-6	PA00	6	CONN, 1P, SR, HDR, ST, UNSHRS, (.10)
U4	IR41	1	REGULATOR, POSITIVE LM340LAZ, T092
U20	ILX10	1	IC, OP AMP, LO-DRFT., JFET, LF412D
U1	ILX06	1	IC, 8 CH, ANA. CMOS MUX DG508ADY
U13	ILX14	1	IC, ANALOG SWITCH, 4PX2T, DG201
U26,32,42	ILX01	6	IC, OP AMP, DUAL, BIFET, LF353D
U11,16,22			
U5	ICX61	1	IC, A/D CONVERTER, 16-BIT, ADS7809U
U8	ICX10	1	IC, DUAL "D" FLIP-FLOP, 74HC74
U7	ICX05	1	IC, HEX INVRTR, 74HC04, S014
U2	ICX04	1	IC, OCTAL "D" FLIP-FLOP, 74HC273
U6	ICX00	1	IC, HEX INV, SCHMITT TRG, 74HC14
U3	IC03	1	IC, DIGITAL COUNTER, MC14028BCP
C10,21	CXT13	2	CAP, 2.2uF, 10%, 20V, 1510, TANT.
C3,6	CXT07	2	CAP, 10uF, 20%, 10V, 6032, TANT.
C7,41,46	CX13	3	CAP, .001uF, 10%, 50V, X7R, 1206, CER.
C59,62,64,70			
C42-45,47-50	CX22	29	CAP, .1uF, 10%, 50V, X7R, CHIP CER.
C28-35,37-40			
C2,4,9,24,26			
C13,36	CX06	2	CAP, 10pF, 20%, 50V, COG, 1206, CER.
C5	CT22	1	CAP, 33uF, 10%, 35V, TANT.
C1,80,81,82	CT01	4	CAP, 6.8uF, 20%, 16V, TANT.
C61,66	CP38	2	CAP, .0068uF, 5%, 50V, POLY.
C58,63	CP37	2	CAP, .068uF, 5%, 50V, POLY.
C14,88	CP36	2	CAP, .33uF, 5%, 63VDC, POLYESTER
C16	CP30	1	CAP, .1uF, 5%, 50V, POLY
C20,23,86,89	CP16	4	CAP, .0022uF, 5%, 50V, POLY.
C22,19	CP14	2	CAP, 3.3uF, 5%, AX, POLY.
C12	CP08	2	CAP, .1uF, 5%, 100V, POLY.
C60,65	CP07	2	CAP, .01uF, 2%, 50V, POLY.
C17	CC29	1	CAP, 2200pF, 10%, 100V, Y5F, CER.
C15,25	CC12	2	CAP, .1uF, 20%, 50V, Z5U, CER.
C18	CC07	1	CAP, 47pF, 10%, 50V, X7R, CER.
C27	CA24	1	CAP, 1uF, 20%, 50V, AL
1	B159	1	PCB, ECG ANALOG NON-ISO, 3150, REV. B
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION

Invivo Research Inc.

PRECISION BIOMEDICAL INSTRUMENTS

Subsidiary of Invivo Corporation

12601 RESEARCH PARKWAY, ORLANDO, FL 32826

TITLE: ASSEMBLY: AB87

PCA, ECG ANALOG NON-ISO, 3150

CAD SCALE: 2 : 1

SHEET: 1 OF 1

DWG. NO.: 194D673

REV.: C

DO NOT SCALE THIS DRAWING !!!

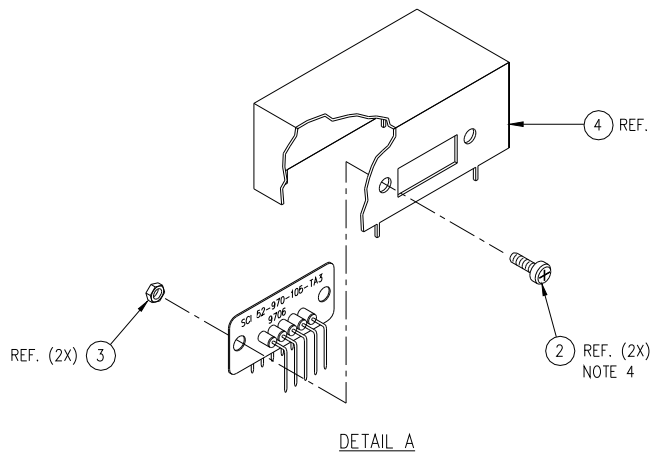
THIRD ANGLE PROJECTION

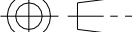
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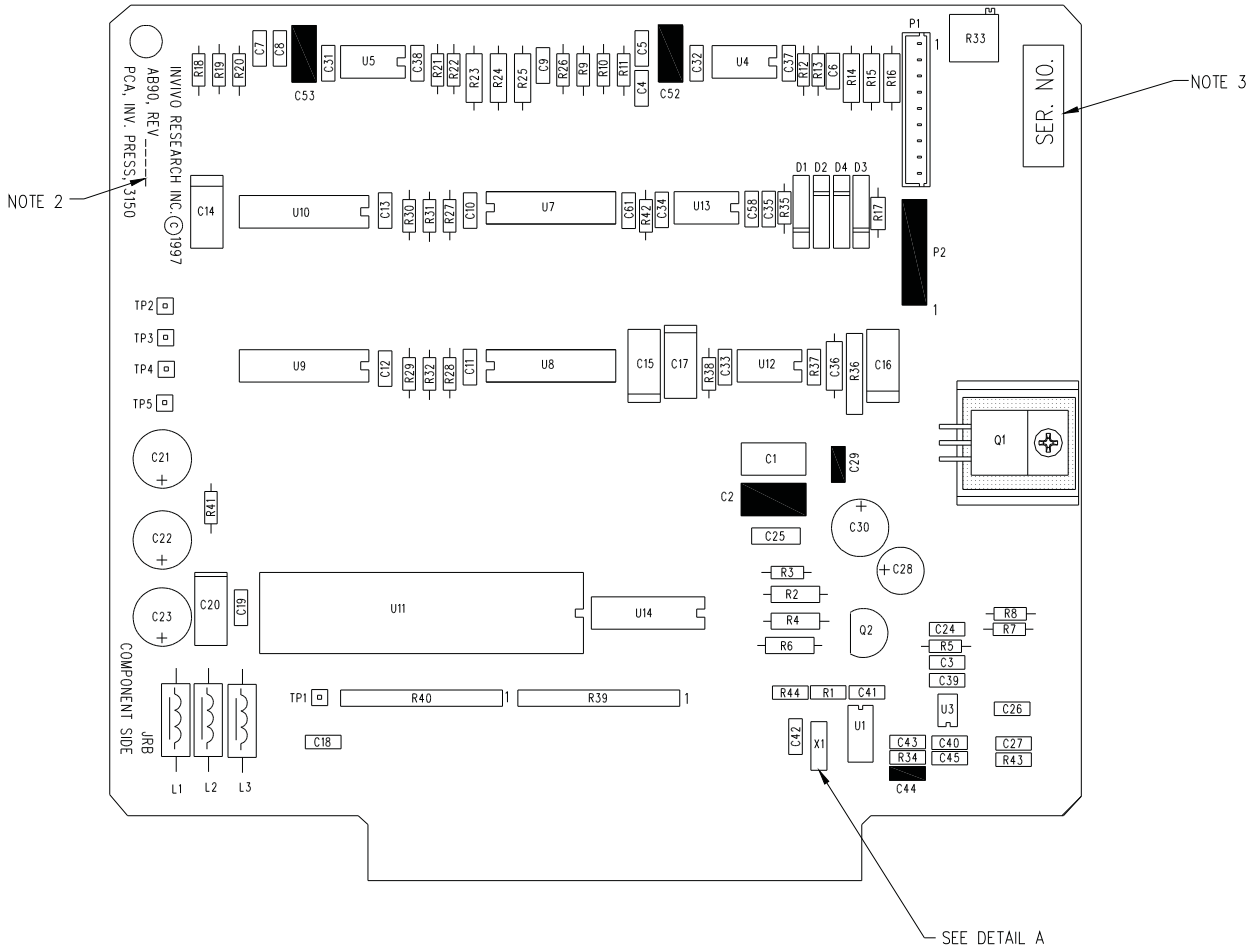
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:
.XX = ±
.XXX = ±
ANGLES = ±

DRAWN: JRB 27JUN97
DESIGNED: CN 19SEP95
CHECKED:
APPROVED:

REV. DESCRIPTION BY DATE

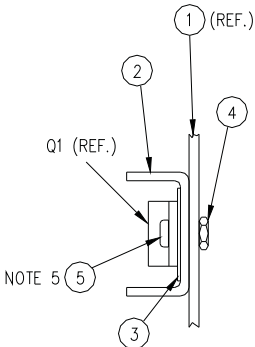


REF.	M050	A/R	ADHESIVE, LOCTITE 425, BLUE ASSURE			C13	CT13	1	CAP, 10uF, 20%, 35V, RADIAL, TANT.		
3	N002N	2	NUT, #4-40 HES-SS, NM			C25	CF14	1	FILTER PLATE, 5000pF, 5 POS, BOLT-IN		
2	NS04N	2	SCR, #4-40 X 1/4 LG. PHMS-XR, NM			C15,16,30	CF06	3	CAP, 10pF, EMI SUPPRESSION FILTER		
4	HM51M	1	SHIELD, ECG/PRESS. ISO, 3150			C31	CC67	1	CAP, 220pF, 20%, 3KV, X5F, CER.		
T1	T065	1	TRANSFORMER, AIR-CORE, 680uH			1	B161	1	PCB, INVAS. PRESS. ISO, 3150, REV. C		
ITEM / REF. DES.		PART NO.	QTY.	DESCRIPTION			ITEM / REF. DES.		PART NO.	QTY.	DESCRIPTION
K	PER ECN #8212	JRB	19SEP01	D	PER ECN #6596	JWT	08JUN98	UNLESS OTHERWISE SPECIFIED TOLERANCES ARE .XX ± .— .XXX ± .— ANGLES ± .—	DRAWN	JRB	27JUN97
J	PER ECN #8426	CHY	6SEP01	C	PER ECN #6533	CHY	16APR98		DESIGNED	CRN	04OCT95
H	PER ECN #7771	ALH	03MAY00	B	PER ECN #6285	KCO	6FEB98		CHECKED		
G	PER ECN #6985	CHY	28DEC98	A	RELEASED, ECN #5818	JRB	15AUG97		APPROVED		
F	PER ECN #6759M	SR	21AUG98	REV.	DESCRIPTION	BY	DATE	 12601 RESEARCH PARKWAY., ORLANDO, FL 32826 TITLE: ASSEMBLY: AB89 PCA, INVAS. PRESS. ISO, 3150			
E	PER ECN #6753	CHY	23JUL98	THIS DOCUMENT IS CONFIDENTIAL AND PROPRIETARY AND IS THE SOLE PROPERTY OF INVIVO RESEARCH INCORPORATED (RI). IT IS NOT TO BE DISCLOSED TO ANY PARTY, REPRODUCED OR USED IN ANY OTHER MANNER WITHOUT WRITTEN CONSENT OF SAG COMPANY. INVIVO RESERVES THE RIGHT TO CHANGE SPECIFICATIONS AT ANY TIME, WITHOUT PRIOR NOTICE.							
REV.	DESCRIPTION	BY	DATE	 INCHES 				CAD SCALE	SHEET	DWG. NO.	REV.
				DO NOT SCALE THIS DRAWING !!!				2 : 1	1 OF 1	194D685	K

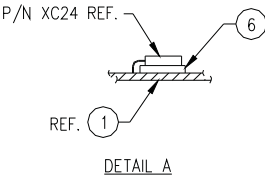


NOTES

1. WORKMANSHIP TO CONFORM TO IPC CLASS II REQUIREMENTS.
2. USING INDELIBLE INK IN CONTRASTING COLOR, PLACE CURRENT ASSEMBLY REV. IN SPACE PROVIDED.
3. BOARD REQUIRES SERIALIZED LABELING WITH THE FOLLOWING INFORMATION: UNIQUE SERIAL NO., ASSEMBLY P/N AND CURRENT REV. LEVEL. PLACE SERIAL NUMBER LABEL IN THIS AREA-ORIENT AS SHOWN.
4. ITEMS SHOWN AS SOLIDS ARE TO BE OMITTED.
5. ADD P/N M050, LOCTITE 425 TO ALL SCREW THREADS.
6. IF THIS ASSEMBLY IS MADE OR REPAIRED USING NO-CLEAN SOLDER, ALL FLUX RESIDUE MUST BE THOROUGHLY REMOVED USING AN APPROPRIATE FLUX CLEANER.



Q1 MOUNTING, EDGE VIEW



DETAIL A

6	M000	.125	TAPE, OPN. CL. FM, DS, .06 THK x .38 W
REF.	M050	A/R	ADHESIVE, LOCTITE 425, BLUE, ASSURE
5	NS04N	1	SCR, #4-40 X 1/4 LG. PHMS-XR, NM
4	N002N	1	NUT, HEX, #4-40, SS, NM
3	HI01	1	INSULATOR, THERMALLY CONDUCTIVE
2	HQ02	1	HEATSINK, LOW PROFILE, T05/220
X1	XC24	1	CRYSTAL, 26.667KHZ, C-2 TYPE
L1,2,3	T008	3	COIL, MOLDED 100uH, 10%
R34,43	RX02	2	RES., 1K, .125W, 5%, 1206
R1	RX124	1	RES, 22W, .125W, 5%, 200PPM, 1206
R44	RX168	1	RES, 499K, .125W, 1%, 100PPM, 1206
R11,20	R163	2	RES, 120K, .25W, 5%, CF
R2	R157	1	RES, 1.2 OHM, .5W, 5%, CF
R35,42	R082	2	RES, 4.7K, .25W, 5%, CF
R10,19	R071	2	RES, 91K, .25W, 5%, CF
R17,26	R063	2	RES, 47 OHM, .25W, 5%, CF
R6	R051	1	RES, 10 OHM, .25W, 5%, CF
R3	R144	1	RES, 68 OHM, .25W, 5%, CF
R9,18	R035	2	RES, 15K, .25W, 5%, CF
R8	R023	1	RES, 51K, .25W, 5%, CF
R27-32,41	R009	7	RES, 22 OHM, .25W, 5%, CF
R7	R005	1	RES, 1.5M, .25W, 5%, CF
R5	R003	1	RES, 5.1K, .25W, 5%, CF
R12,13,21,22,38	R002	5	RES, 10K, .25W, 5%, CF
R4	R001	1	RES, 1K, .25W, 5%, CF
R39,40	RS06	2	RESNET, 10K, SIP, 9-POS/10-PIN, CF
R33	RP85	1	RES, 250K, POT, 10%, .25W, FLTSDADJ
R36	RF52	1	RES, 20K, .125W, 1%, MF
R14-16,23-25,37	RF07	7	RES, 10K, .125W, 1%, MF
Q1	Q026	1	D44H11 NPN SILICON POWER PAK
Q2	Q020	1	TRANS, 2N3904, NPN, TO-92
P1	PA177	1	CONN, 9P, SR. HDR, SHRD, KYD, .098
TP1-5	PA00	5	CONN, 1P, SR, HDR, ST, UNSHRD, .100
U11	IN26	1	I/O, PARLEL, PROGRAM, CMOS 40P DIP
U4,5,12,13	IL06	4	OP AMP, DUAL, JFET LF353
U3	ILX01	1	IC, OP AMP, DUAL, BIFET, LF353D
U14	IC63	1	IC, QUAD 2-IN POS. AND, 74HC7001
U7-10	IC51	4	IC, 8 BIT D-A CONVERTER, AD7524K
U1	ICX05	1	IC, HEX INVERTER, 74HC04, S014
D1-4	D008	4	DIODE, SCHOTTKY, 1 AMP, 40V
C58, 61	CX28	2	CAP, .015uF, 5%, 50V, X7R, 1206, CER.
C45	CX13	1	CAP, .001uF, 10%, 50V, X7R, 1206, CER.
C42,43	CX06	2	CAP, 10pF.20%, 50V, COG, 1206, CER.
C5,8	CX27	2	CAP, .033uF, 10%, 50V, X7R, 1206, CER.
C26	CX18	1	CAP, 47pF, 5%, 50V, X7R, 1206, CER.
C31-41	CX22	24	CAP, .1uF, 20%, 50V, X7R, CER.
C18,19,24,27			
C3,4,6,7,9-13			
C14-17,20	CXT05	5	CAP, 10uF, 20%, 35V, TANT. CHIP
C30	CT22	1	CAP, 33uF, 10%, 35V, TANT.
C1	CP08	1	CAP, .1uF, 5%, 100V, POLY
C25	CC29	1	CAP, 2200pF, 10%, 100V, Y5F, CER.
C28	CA24	1	CAP, 1uF, 20%, 50V, AL
C21,22,23	CA07	3	CAP, 220uF, 20%, 16V, AL, RADIAL
1	B162	1	PCB, INV. PRESS, NON-ISO, 3150, REV. A
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION

	D	PER ECN #6759M	SR	21AUG98		
	C	PER ECN #6544	CHY	1JUN98		
	B	PER ECN #6441	CHY	17MAR97		
	A	RELEASED, ECN #5823	JRB	18AUG97		
G	PER ECN #8400	CHY	9AUG01	REV.	DESCRIPTION	BY DATE
F	PER ECN #7302	SR	24SEP99			
E	PER ECN #6986	CHY	29DEC98			
REV.	DESCRIPTION	BY	DATE			

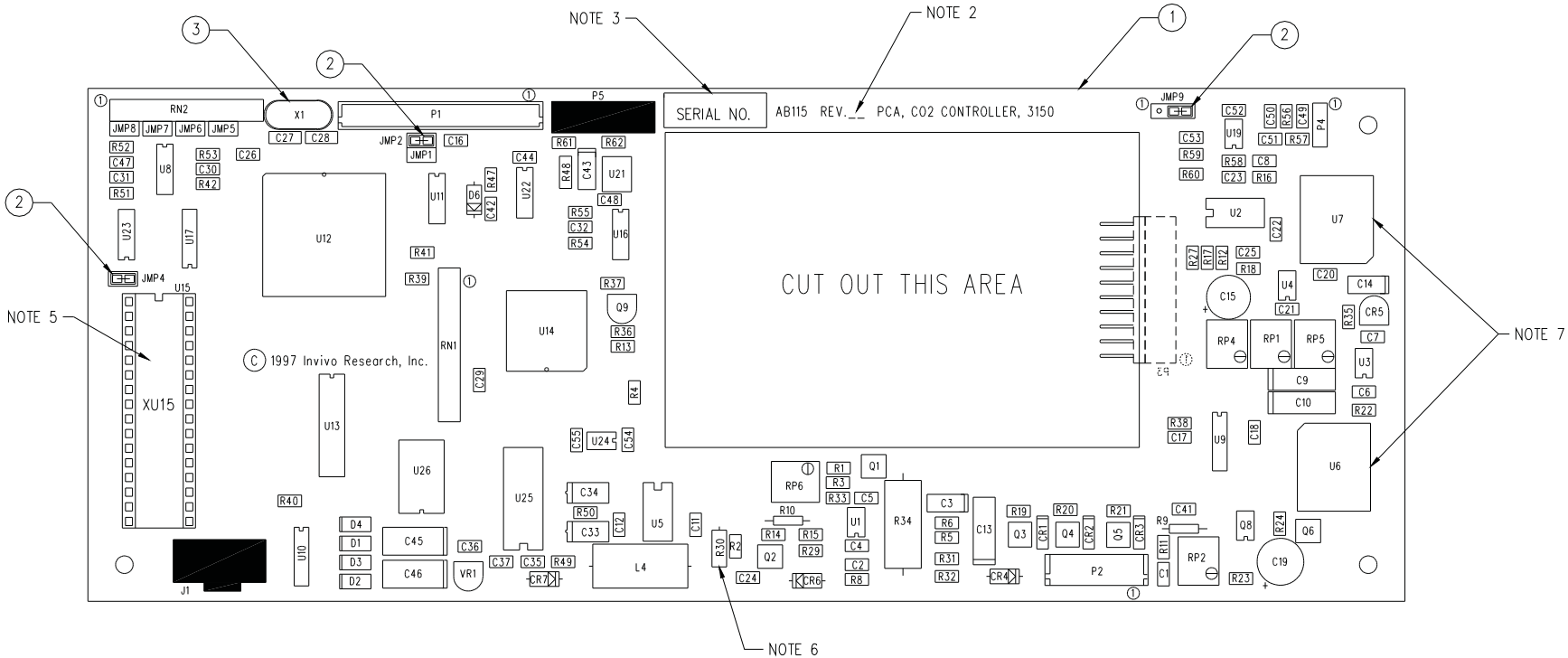
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UNLESS OTHERWISE SPECIFIED TOLERANCES ARE	DRAWN	JRB	3JUL97
.XX = ±	DESIGNED	CN	4OCT95
.XXX = ±	CHECKED		
ANGLES = ±	APPROVED		

12601 RESEARCH PARKWAY., ORLANDO, FL 32826

TITLE: ASSEMBLY: AB90
PCA, INV. PRESS, NON-ISO, 3150

CAD SCALE: 2 : 1 SHEET: 1 OF 1 DWG. NO.: 194D686 REV: G



NOTES:

1. WORKMANSHIP TO CONFORM TO IPC CLASS II REQUIREMENTS.
2. USING INDELIBLE INK IN CONTRASTING COLOR, PLACE CURRENT ASSEMBLY REVISION IN SPACE PROVIDED.
3. BOARD REQUIRES SERIALIZED LABELING WITH THE FOLLOWING INFORMATION: UNIQUE SERIAL NO., ASSEMBLY P/N & CURRENT REV. LEVEL. PLACE SERIAL NUMBER LABEL IN THIS AREA-ORIENT AS SHOWN.
4. ANY COMPONENTS SHOWN AS SOLID ARE TO BE OMITTED.
5. AM60 (IM46) TO BE INSTALLED AT FINAL ASSEMBLY.
6. R30 TO BE MOUNTED .060" ± .000 ABOVE THE BOARD SURFACE.
7. HAND SOLDER HP52 (U6) & HP53 (U7) USING "NO CLEAN" SOLDER. DO NOT IMMERSE OR OTHERWISE CONTAMINATE SENSOR. DO NOT CLEAN IN VAPOR DEGREASER.

3	HI37	1	INSULATOR, CRYSTAL, MYLAR
X1	XC13	1	CRYSTAL, 12.288 MHZ
L4	T027	1	COIL, 220 uH
R50	RX253	1	RES, 33.2K, 1%, .10W, 100 PPM, 0805
R47	RX252	1	RES, 332K, 1%, .10W, 100 PPM, 0805
R49	RX251	1	RES, 200 OHM, 1%, .10W, 100 PPM, 0805
R4,5,13,15,23 R31,37,38,39,41 52,53,55-57	RX250	15	RES, 10K, 1%, .10W, 100 PPM, 0805
R12,16	RX249	2	RES, 499K, 1%, .10W, 100 PPM, 0805
R33	RX248	1	RES, 5.6K, 1%, .10W, 100 PPM, 0805
R6	RX247	1	RES, 21.5K,1%, .10W, 100 PPM, 0805
R18,27	RX245	2	RES, 15K, 1%, .10W, 100 PPM, 0805
R11,17	RX244	2	RES, 47K, 1%, .10W, 100 PPM, 0805
R3,8,14,22	RX243	4	RES, 1K, 1%, .10W, 100 PPM, 0805
R58	RX242	1	RES, 499 OHM, 1%, .10W, 100 PPM, 0805
R32	RX240	1	RES, 221 OHM, 1%, .10W, 100 PPM, 0805
R24,36	RX238	2	RES, 51.1K, 1%, .10W, 100 PPM, 0805
R61,62	RX236	2	RES, 20K, 1%, .10W, 100 PPM, 0805
R1,2,19-21,29,40	RX222	7	RES, 2K, 5%, .1W, 200 PPM, 0805
R42,51,54	RX220	3	RES, 100 OHM, 5%, .10W, 250 PPM, 0805
R59,60	RX215	2	RES, 10 OHM, 5%, .10W, 250 PPM, 0805
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION

R35	RX212	1	RES, 619 PHJM, 1%, .125W, 0805
R48	RX46	1	RES, 1.2M, .125W, 5%,200PPM, 1206
RN1,2	RS06	2	RESNET, 10K SIP, 9 POS/10 PIN, CF
RP6	RPX03	1	RES, 100K POT, .25W, 10%, 16T, TOP, SMD
RP1,2,5	RPX02	3	RES, 10K POT, .25W, 10%, 16T, TOP, SMD
RP4	RPX01	1	RES, 2K POT, .25W, 10%, 16T, TOP, SMD
R30	RF169	1	RES, .27 OHM, 1W, 1%, WW
R10	RF54	1	RES, 3.32K, .125W, 1%, MF
R9	RF30	1	RES, 42.2K, .125W, 1%, MF
R34	R076	1	RES, RES, 1.2 OHM 1W, 5%, METAL OXIDE
Q8	QX12	1	IC, TRANS,DUAL P-CH, MOSFET,S08
Q2	QX01	1	TRANS, PNP, SILICONE, SO23, TYPE 2907A
Q1,3-6	QX00	5	TRANS,NPN, SILICONE, SO23, TYPE 2222
Q9	Q003	1	TRANS, FET, N-CH, TO-92, VN10KM
2	PA318B	3	SHUNT, 2P, LO-PROFILE (.100)
JMP1,2,4-8	PA318A	7	CONN, 2P, ST, UNSHRD, LO-PRDF, (.100)
P3	PA315	1	CONN, 20P, DR, HDR, RA, UNSHRD (.100)
P1	PA231	1	CONN, 13P, SR, HDR,ST, SHRD, (.098)
P2	PA192	1	CONN, 6P, SR, HDR, ST, (.098)
JMP9, P4	PA08	2	CONN, 3P, SR, HDR, ST, UNSHRD, (.100)
CR5	IR50	1	VLTG. REF, PRECISION, PROGRMBL, TL431CP
VR1	IR41	1	REGULATOR, POSITIVE LM340LAZ-5
U5	IR04	1	CONVERTER,DC TO DC MC34063AP1
U12	INX03	1	IC, MPU, 10MHZ, 64180, PLCC68
U14	INX02	1	IC, PARA.I/O PRGMBL,CMOS, 82C55A
U13	IMX06A	1	IC, SRAM, SOJ-28 PIN, 10ns, AS7C256
XU15	P029	1	SOCKET, 32 PIN DIP, .600 WIDE
U3,U19	ILX16	2	IC, INSTRUMENTATION AMPLIFIER, AD620BR
U1,U4	ILX10	1	IC, OP AMP, LO-DRIFT, JFET, LF412D
U24	ILX07	1	IC, IC, OP AMP, DUAL JFET, MC33182
U9	ILX06	1	IC, 8-CH. ANALOG CMOS MUX DG508ADY
U2	IL25	1	IC, OP AMP, OPA27GP
U25	ICX37	1	IC, D/A 16-BIT CONVERTER, ADS7805U
U26	ICX35	1	IC, OCTAL BIDIRECTNL, TRNSCEIVER, 74ACT245
U23	ICX32	1	IC, QUAD 3-INPUT OR GATE, 74AC732
U21	ICX21	1	IC, SVS/PVD RESET GENERATOR, TL7757CP
U10,17	ICX11	2	IC 1 OF 8 DECODER, SO16, 74HC138
U8,16	ICX10	2	IC, DUAL-D FLIP-FLOP, 74HC74
U11	ICX05	1	IC, HEX INVERTER, 74HC04, SO14
U22	ICX00	1	IC, HEX INVERTER, SCHMITT TRIGGER, 74HC14
U7	HP53	1	SENSOR, ABS-PRESSURE, 0-15 PSI
U6	HP52	1	SENSOR, DIFFERENTIAL PRESSURE, 0-5 PSI
CR4	DZ03	1	DIODE, ZENER, 1N758A, 10V, 500mW
D1-4	DDX05	4	DIODE, SCHOTTKY, SMALL SIGNAL, MINI-MELF
CR1,2,3	DDX01	3	DIODE, SIGNAL, LEADLESS, 500mW
CR6,7	D008	2	DIODE, SCHOTTKY, 1 AMP, 40V
D6	D006	1	DIODE, SCHOTTKY, 30V, 200mA
C33,34	CXT13	2	CAP, 2.2UF, 10%, 20V, 1510 TANTALUM
C45,46	CXT05	2	CAP, 10UF, 20%, 35V, 7343 TANTALUM
C3,14,43	CXT04	3	CAP, 1UF, 20%, 35V, 6032 TANTALUM
C9,10,13	CXT02	3	CAP, 6.8UF, 20%, 35V, 7343, TANTALUM
C12	CX61	1	CAP, .470PF, 10%, 50V, X7R, CERAMIC, 0805
C30-32,35,50,51	CX60	6	CAP, .001UF, 10%, 50V, X7R, CERAMIC, 0805
C2,49	CX59	2	CAP, .01uf, 10%, 50V, X7R, CERAMIC, 0805
C52-55	CX58	29	DIODE, SCHOTTKY, SMALL SIGNAL, MINI-MELF
C41,42,44,47,48			
C20-26,29,36,37			
C1,4-8,11,16-18			
C27,C28	CX25	2	CAP, 22pF, 5%, 50V, X7R, CERAMIC, 1206
C15	CT12	1	CAP, .47uF, 10%, 35V, RADIAL, TANTALUM
C19	CA30	1	CAP, 100uF, 20%, 25V, ALUMINUM, RADIAL
1	B184	1	PCB, CO2 PNEUMATICS, 3150
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION

C	PER ECN #7211	CHY	4JUN99
B	PER ECN #6599	JWT	10JUN98
A	RELEASED, ECN #6424	SLC	27FEB98
REV.	DESCRIPTION	BY	DATE
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UNLESS OTHERWISE SPECIFIED TOLERANCES ARE .XX = ± .02 .XXX = ± .010 ANGLES = ± 1°	DRAWN SUCASTEL 27FEB98	DESIGNED SUCASTEL 27FEB98	CHECKED SUCASTEL 27FEB98	APPROVED
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DO NOT SCALE THIS DRAWING !!!

THIRD ANGLE PROJECTION

INCHES

DO NOT SCALE THIS DRAWING !!!

Invivo Research Inc.

PRECISION BIOMEDICAL INSTRUMENTS
Subsidiary of Invivo Corporation

12601 RESEARCH PARKWAY., ORLANDO, FL 32826

TITLE:
ASSEMBLY DWG: AB115
PCA, ETCO2 PNEUMATICS BD, 3150

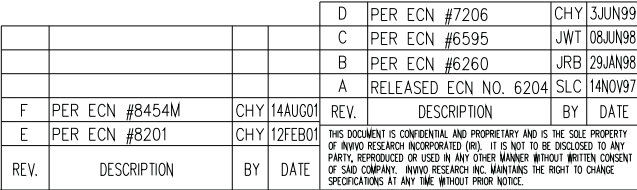
CAD SCALE: 1 : 1

SHEET: 1 of 1

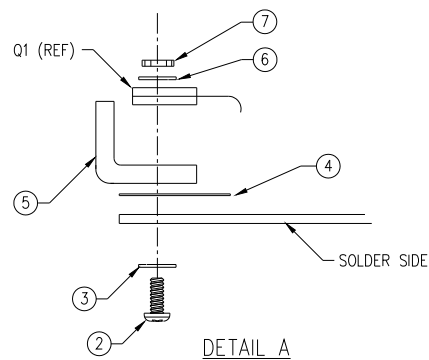
DWG. NO.: 194D774

REV: C

1. INSTALL P5 ON SOLDER SIDE OF BOARD.
2. USING P/N W019 BUSS WIRE, JUMPER AT LOCATIONS AS SHOWN.
3. COMPONENTS SHOWN AS SOLID ARE TO BE OMITTED.
4. INSTALL RESISTOR, P/N RM45 (100K 1% .05W MF) ON THE COMPONENT SIDE AS "R87" FROM FEED THRU @ UPPER LEFT OF C33 TO FEED THRU @ UPPER LEFT OF C56
5. INSTALL P/N AM18 PROM SET AT FINAL ASSEMBLY.
6. WORKMANSHIP TO CONFORM TO IPC CLASS II REQUIREMENTS.
7. BOARD REQUIRES SERIALIZED LABELING WITH THE FOLLOWING INFORMATION:
UNIQUE SERIAL NO., ASSEMBLY P/N AND CURRENT REV. LEVEL.
PLACE SERIAL NUMBER LABEL IN THIS AREA—ORIENT AS SHOWN.
8. USING INDELIBLE INK IN CONTRASTING COLOR, PRINT CURRENT REVISION IN SPACE PROVIDED. SIGNIFY BOARD ASSY. BY PRINTING AN "M" AFTER "AB22", AS SHOWN.
9. BEND P/N PA39 AT LOCATION P1 APPROX. 45° FROM BOARD.
10. ADD P/N W004A JUMPER WIRES (ITEM 3) TO SOLDER SIDE OF BOARD
AT 4 LOCATIONS, AS SHOWN. APPLY TAK-PAK TO WIRES AT 1.50 INTERVALS.
11. CUT PIN 4 FLUSH WITH BASE OF CONNECTOR ON P1 AS SHOWN.
12. FLOW A SOLDER JOINT BETWEEN +15V VIA AND PAD OF L1 AS SHOWN.



LF21 REV. A

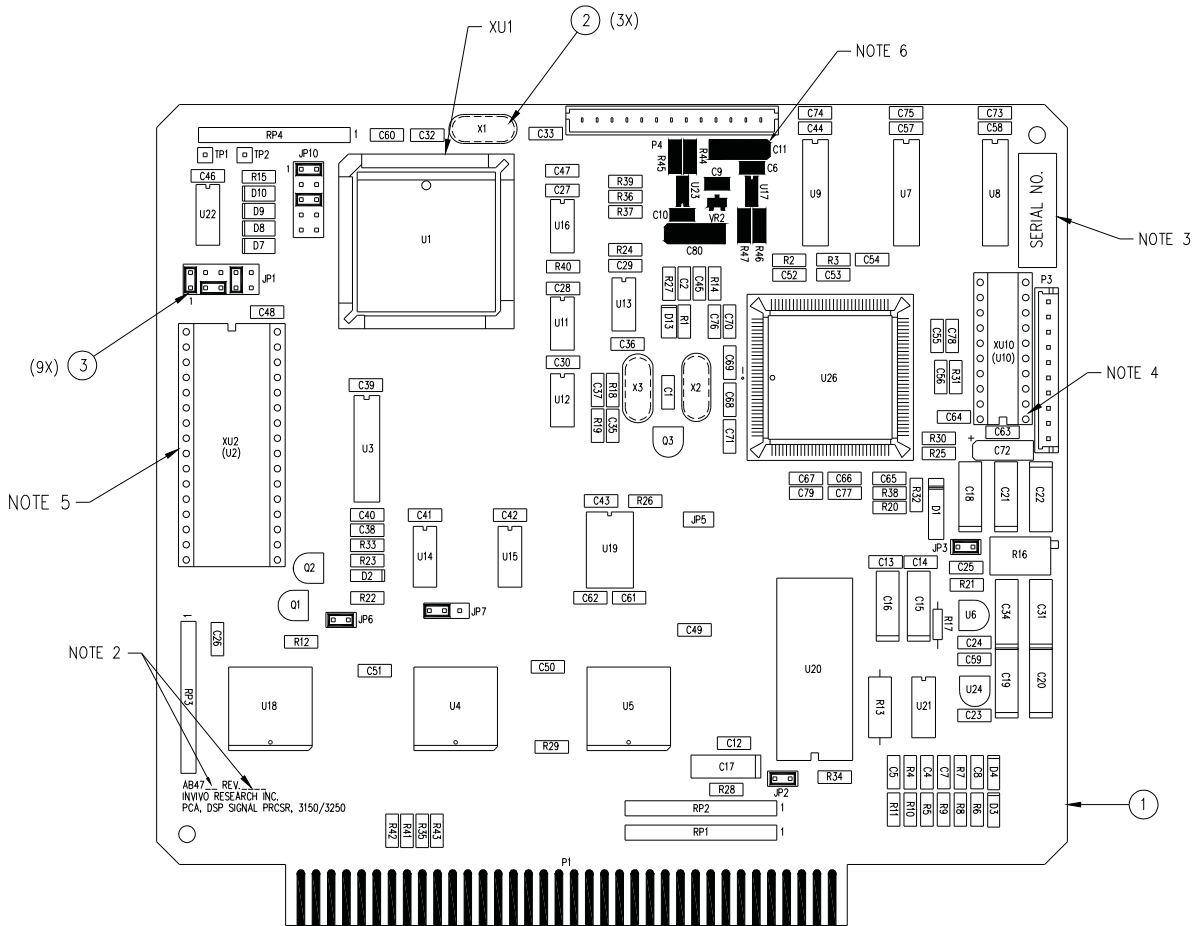


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- NOTE 8 (10)
- (A1)
(B1)
- (P13)
- (A1)
(B1)
- (27)(28)
- (P12)
- (A1)
(B1)
- (14)
- (29)
- (P11)
- SOLDER SIDE
OTHER COMPONENTS NOT
SHOWN FOR CLARITY
- (10) NOTE 8

K	PER ECN #8394	SR	31AUG01	D	PER ECN #7794AM	CHY	17MAY01
J	PER ECN #8103	JRH	29NOV00	C	PER ECN #7647	SLC	24FEB01
H	PER ECN #7942	CHY	29AUG00	B	PER ECN #6448	JRB	15APR01
G	PER ECN #7663	CHY	10AUG00	A	RELEASED, ECN #6204	JRB	16NOV00
F	PER ECN #7927	KCO	26JUL00	REV.	DESCRIPTION	BY	DATE
E	PER ECN #7847	CHY	27JUN00	THIS DOCUMENT IS CONFIDENTIAL AND PROPRIETARY AND IS THE SOLE PROPERTY OF INVAIO RESEARCH CORPORATION. IT IS NOT TO BE DISCLOSED OR REPRODUCED IN ANY MANNER WITHOUT THE WRITTEN CONSENT OF SAID COMPANY. INVAIO WARRANTS THAT NOT TO CHANGE SPECIFICATIONS AT ANY WITHOUT PRIOR NOTICE.			
REV.	DESCRIPTION	BY	DATE				

10	W004A	A/R	30 GAGE WIRE WRAP/ROLL
9	W019	A/R	WIRE, BUSS, SOFT DRAWN, 24 GAGE
8	PA66	2	SHUNT, 2 POSITION, .10 CTRS
L1-3	T008	3	COIL,MOLDED 100UH,10%
X1	XC23	1	CRYSTAL OSCILLATOR, 4.096 MHZ, 4P DIP
R31,32	RX42	2	RES, 100 OHM, 5%, .25W, 200PPM, 1206
R29	RX57	1	RES, 10K, .125W, 1%, 100PPM, 1206
R8,30,33	RX91	3	RES, 220 OHM, .125W, 5% 200PPM, 1206
R10	RS43	1	RES,SIP,4.7K,10 POS,CF
R13	R177	1	RES,.33 OHM,5%,1W,M.O.
R11	R050	1	RES,2.2K,.25W,5%,CF
R12	R028	1	RES,6.2K,.25W,5%,CF
R19-23,25,26	R022	7	RES,20K,5%,1W,M.O.
R27,28	R017	2	RES,2K OHM,5%,.25W,CF
R14-18,24	R009	6	RES,22 OHM,5%,1W,M.O.
R4	RF11	1	RES, 110K, 1%, .125W, MF
R3	RF224	1	RES, 267K, 1%, .25W, MF
R1,2	R002	2	RES,10K,.25W, 5%, CF
Q1	Q008	1	TRANSISTOR, NPN, DARL. 2N6037
Q2,3	Q000	2	TRANSISTOR, 2222A,T092,NPN
JP3	PA49	1	HEADER, UNSH, SR, 2 PIN, (.10)
P8,27	PA231	2	CONN,13P,SR,HDR,ST,SHRD, .098 CTRS
P25	PA177	1	HEADER,KEYED,SHRD,SR,9 PIN,.10
P14	PA175	1	HEADER,KEYED,SHRD,SR,5 PIN,.10
P11	PA70	1	CONN,PARALLEL ENTRY,72 PIN.
P4,5,10,12,13	PA59	5	CONN,60P,DR,HDR,ST,.100CTR,GLD
P9	PA58	1	CONN,65POS,DUAL READ-OUT,100C
P1	PA37	1	CONN, 10P, SR,HDR, .100 CTRS.
P23	PA22	1	HEADER,UNSH,SR,4 PIN (.10)
JPI, P17-19,P21 TP1,TP2,TP10	PA08	8	CONN,3P,SR,HDR,ST,UNSHRD,(.10)
P24	PA03	1	CONN,8P,SR,HDR,ST,UNSHRD,(.10)
P3	PA02A	1	CONN,20P,DR,HDR,ST,UNSHR,(.10)
P2	PA01	1	CONN,6P,SR,HDR,ST,UNSHRD,(.10)
U5	ICX31	1	IC,RS232 DRV/RVCV W/SHDN,LT1039
U6	ICX10	1	IC, DUAL "D" FLIP-FLOP, 74HC74
Z1-3	DZ16	3	TRANSORBE
D1-4	D003	4	DIODE, SCHOTTKY,1N5711
D9-13	D000	5	DIODE,SIGNAL,1N4148
C39,40,30,31,32,33	CX38	6	CAP, .01uF, 20%, 100V, Z5U, 1206, CER.
C34	CX32	1	CAP, 470pF, 10%, 50V, X7R, 1206, CER.
C35	CX22	1	CAP, .1uF, 10%, 50V, NPO, 1206, CER.
C18-23	CX13	6	CAP, .001uF, 10%, 50V, X7R, 1206, CER.
C36,37,38	CX09	3	CAP, 100PF, 10%, 50V, COG, 1206, CER.
C10	CT13	1	CAP,10UF,20%, 35V, RAD,.2LS,TANT
C14	CS00	1	CAP,SIP,10 PS1N,100PF,10%,50V
C11,12,24-29	CC12	8	CAP,.1UF,+/-20%,50V,Z5U,CER
C17	CC05	1	CAP,.001UF,10%,50V,X7R,CER.
C4	CT24	1	CAP, 10uF, 50V, TANT.
C1-3,13	CA07	4	CAP,220UF,20%,16V,AL,RADIAL
7	N002N	1	NUT, HEX, #4-40, SS, NM
6	NW10	1	WASHER,COMPRESN,12X3.275X.050
5	HM62K	1	HTSK,BRKT,MOTHER BD,PHYSIO/SVS
4	HI01	1	INSULATOR, THERMALLY CONDUCTIVE
3	NW16	1	WASHER, NYLON, #4 X .250 X .062
2	NS17N	1	SCREW, #4-40, X1/2" LONG, PHMS-XR,NM
1	B149	1	PCB,MOTHER BD,3150/SVS REV. E
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:	DRAWN	CN	1/31/96	 Invivo Research Inc. PRECISION BIOMEDICAL INSTRUMENTS 12601 RESEARCH PARKWAY., ORLANDO, FL 32826
.XX = ±	DESIGNED	CN	1/31/96	
.XXX = ±	CHECKED			
ANGLES = ±	APPROVED			
				TITLE ASSEMBLY: AB67M PCA, MOTHER BD.,3150/M
THIRD ANGLE PROJECTION DO NOT SCALE THIS DRAWING!!				CAD SCALE SHEET DWG. NO. REV. 2 : 1 1 of 1 194D781 K



NOTES:

1. WORKMANSHIP TO CONFORM TO IPC CLASS II REQUIREMENTS.
2. USING INDELIBLE INK IN CONTRASTING COLOR, ADD AN "A" AFTER "AB47" TO DENOTE THIS PART NUMBER AND PLACE CURRENT ASSEMBLY REVISION IN SPACE PROVIDED.
3. BOARD REQUIRES SERIALIZED LABELING WITH THE FOLLOWING INFORMATION:
UNIQUE SERIAL NO., ASSEMBLY P/N & CURRENT REV. LEVEL.
PLACE SERIAL NUMBER LABEL IN THIS AREA-ORIENT AS SHOWN.
4. U10 (AM58) TO BE INSTALLED AT ELECTRONICS ASSEMBLY LEVEL.
5. U2 (AM57A) TO BE INSTALLED AT TOP LEVEL ASSEMBLY OF 3150 MRI (DWG# 197C534).
6. PARTS SHOWN AS SOLIDS ARE TO BE OMITTED.

H	PER ECN #8407	JRB	17JUL01
G	PER ECN #8106	JRH	13NOV00
F	PER ECN #7940	CHY	28AUG00
E	PER ECN #7927	KCO	26JUL00
REV.	DESCRIPTION	BY	DATE

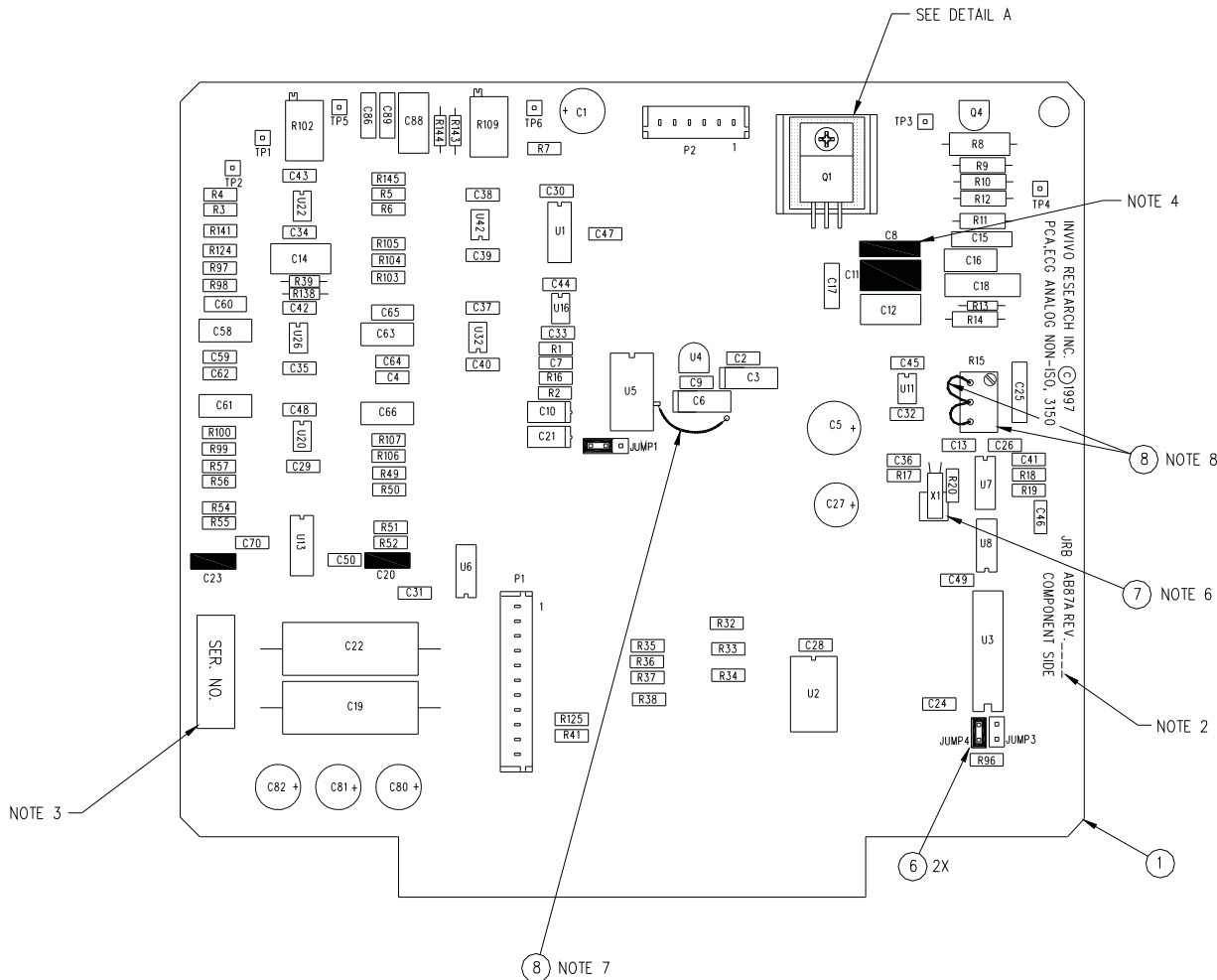
D	PER ECN #7875	CHY	29JUN00
C	PER ECN #7302	SR	24SEP99
B	PER ECN #7019	CHY	27APR99
A	PER ECN #6392	CHY	19NOV98
REV.	DESCRIPTION	BY	DATE

ITEM / REF. DES.	PART NO.	QTY.
DRAWN	CHY	19NOV98
DESIGNED	JN	6/92
CHECKED		
APPROVED		

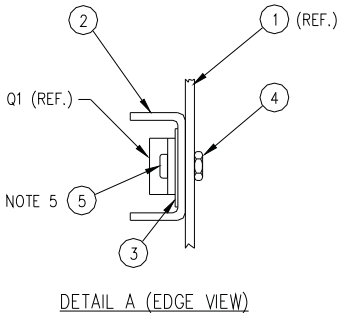
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE: .XX = ± XXX = ± ANGLES = ±	THIRD ANGLE PROJECTION	DO NOT SCALE THIS DRAWING !!!
CAD SCALE: 2 : 1		
SHEET: 1 OF 1		
DWG. NO.: 194D826		
REV: H		

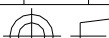
C72	CXT07	1	CAP, 10uF, 20%, 10V, TANT., 6032
R35,41	RX141	2	RES, 33 OHM, 5%, .125W, 200PPM, 1206
R42,43	RX08	2	RES, 4.7K, 5%, .125W, 400PPM, 1206
3	PA66	9	SHUNT, 2 POSITION, .100 CTRS
2	HI37	3	INSULATOR, CRYSTAL, MYLAR
U10	AM58	REF.	PROM SET, DSP, GAL, 3150
U2	AM57AM	REF.	PROM SET, DSP, 3150M, MAGNITUDE
XU10	P028	1	SOCKET, 20-PIN DIP, .300 CTR.
XU2	P029	1	SOCKET, 32-PIN DIP, .600 CTR.
XU1	PX00	1	SOCKET, 68 PIN PLCC SOLDERTAIL
X3	XC09	1	CRYSTAL, 3.57954 MHz
X1, X2	XC16	2	CRYSTAL, 20.000 MHz
R21	RX147	1	RES, 200 OHM, .125W, 1%, 100PPM, 1206
R1	RX110	1	RES, 680K, 5%, .25W, 200PPM, 1206
R4-11,28,29	RX42	11	RES, 100 OHM, 5%, .125W, 200PPM, 1206
R34,36-R40	RX40	15	RES, 10K, 5%, .125W, 200PPM, 1206
R22,23,26,33			
R2,3,12,14,20			
R27	RX23	1	RES, 1K, 5%, .125W, 200PPM, 1206
R25,30,31,32	RX21	4	RES, 20K, .125W, 5%, 200PPM, 1206
R15,24	RX19	2	RES, 2K, 5%, .125W, 200PPM, 1206
R18,19	RX00	2	RES, 100K, 5%, .125W
RP1-4	RS06	4	RESNET, 10K, SIP, 9-POS/10-PIN, CF
R16	RP25	1	RES, 200 OHM, POT, 68XR200
R17	RF87	1	RES, 499 OHM, .125W, 1%, MF
R13	R161	1	RES, 180 OHM, .5W, 5%, CF
Q2	Q018	1	TRANS, PWR FET DMOS, P-CH, VP1306
Q1,3	Q003	2	TRANS, FET, N-CHNL, TO-92, VN10KM
P3	PA272	1	CONN, 10P, SR, HDR, ST, SHRD, .098
P4	PA231	1	CONN, 13P, SR, HDR, ST, SHRD, .098
JP1,10	PA37	2	HEADER, UNSH, DR, 10 PIN, .100
JP2,3,5,6	PA49	4	HEADER, 2P, UNSH., SR, .100
JP7	PA08	1	CONN, 3P, SR, HDR, ST, UNSHRD, .100
TP1,2	PA00	2	CONN, 1P, SR, HDR, ST, UNSHRD, (.10)
U24	IR40	1	REGULATOR, NEGATIVE LM320LZ-5
U6	IR09	1	REGULATOR, POSITIVE LM317LZ
U1	INX03	1	MPU, 10 MHZ, 68P, PLCC68, 64180
U4,5,18	INX02	3	I/O, PARALLEL, 8255, CMOS, 44PLCC
U26	IMX07A	1	DIGITAL SIGNAL PROCSR., DSP56002, 66MHZ
U3,7,8,9	IMX06A	4	IC, SRAM, 28P-SOJ, AS7C256, 10NS
U21	ILX06	1	IC, 16P, MLTPLXR, CMOS ANALOG., C-CH.
U11	ICX24	1	IC, QUAD 2-INPUT NAND, 74HC00M
U14,15,22	ICX11	3	DECODER, 1 OF 8, S016, 74HC138
U13,16	ICX10	2	FLIP-FLOP, DUAL "D" S014, 74HC74
U12	ICX05	1	INVERTER, HEX, S014, 74HC04
U19	ICX04	1	FLIP-FLOP, OCTAL, "D", 74HC273
U20	IC88	1	IC, A-D CNV. 12BIT, ADC12451
D7-10,13	DDX05	5	DIODE, SCHOTTKY, 1N5711, LEADLESS
D2,3,4	DDX01	3	DIODE, SIGNAL, LEADLESS, 500mW
D1	D020	1	DIODE, SCHOTTKY, SB160, 60V, 1A, D015
C4,8	CX28	2	CAP, .015uF, 5%, 50V, X7R, 1206, CER.
C15-22,31,34	CXT02	10	CAP, 6.8uF, 20%, 35V, 7343, TANT.
C45	CX39	1	CAP, 8.2nF, 10%, 50V, X7R, 1206
C35	CX26	1	CAP, 68pF, 5%, X7R, 50V, 1206, CER.
C1,2,32,33	CX25	4	CAP, 22pF, 5%, 50V, X7R, 1206, CER.
C39-44,46-71			
C23-30,37	CX22	46	CAP, .1uF, 10%, 50V, X7R, 1206, CER.
C5,7,12-14			
C36	CX15	1	CAP, 27pF, 10%, 50V, COG, 1206, CER.
C38,73-79	CX11	8	CAP, .01uF, 10%, 50V, X7R, 1206, CER.
1	B234	1	PCB, DSP SLEW/GRAD., 3150, REV. A

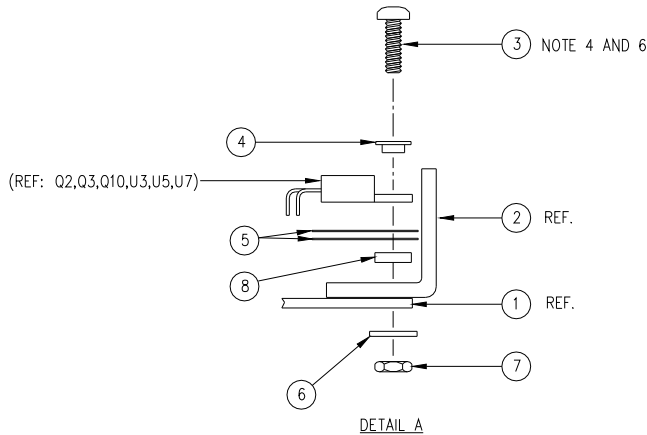
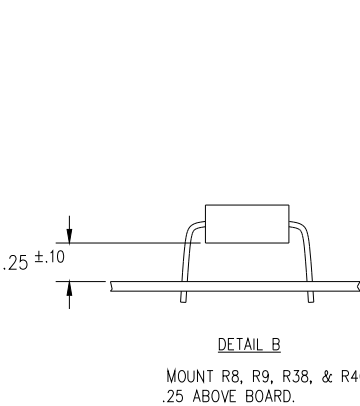
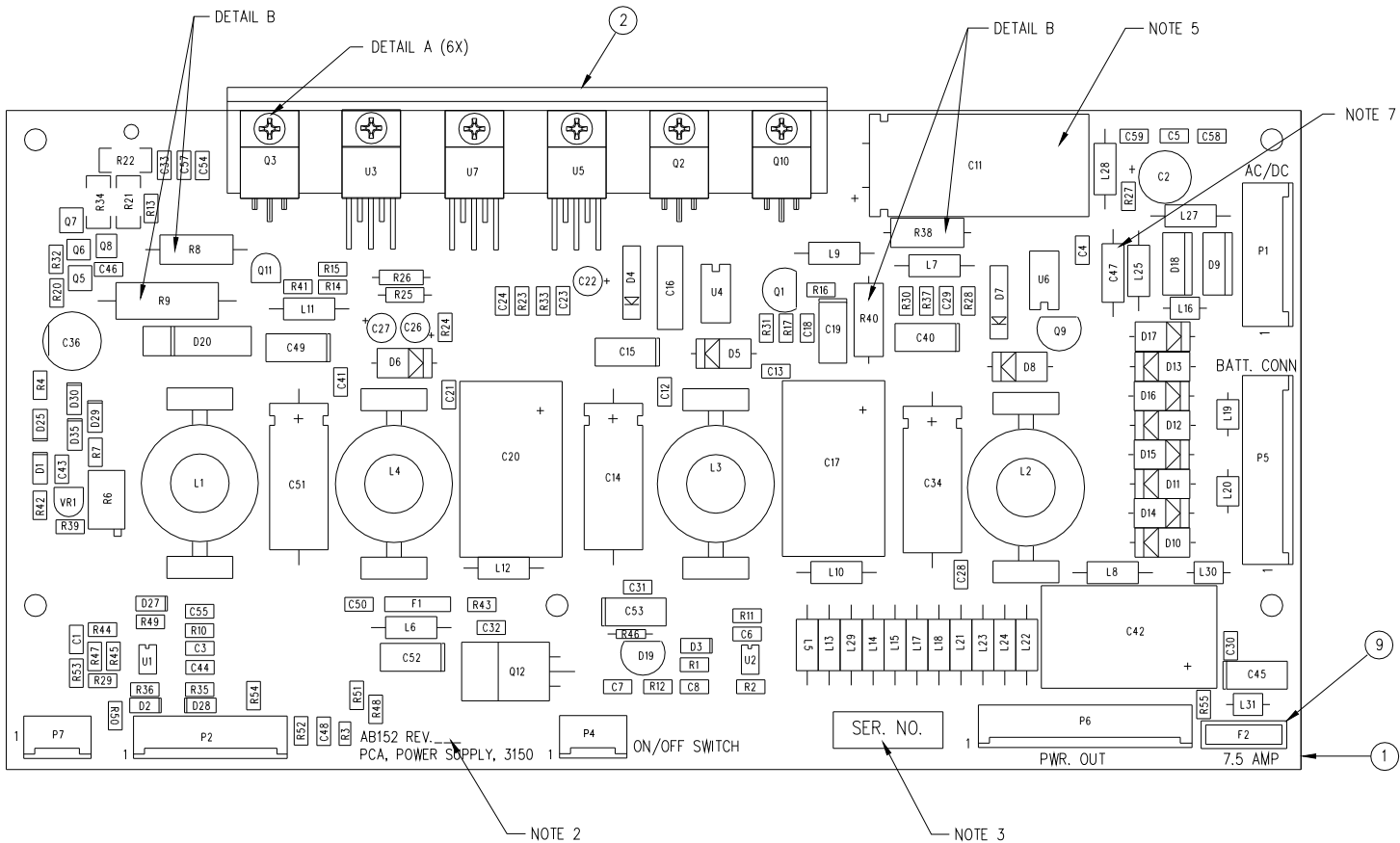
8	W004A	2.50	30 GAGE WIRE WRAP/ROLL
7	M000	.38	TAPE, OPN. CL. FM, DS, .06THK X .38W
REF.	M050	A/R	ADHESIVE, LOCTITE 425, BLUE ASSURE
6	PA66	2	SHUNT, 2 POS. .10 CTRS.
5	NS26N	1	SCR, #4-40 X 3/8 LG. PHMS-XR, NM
4	N002N	1	NUT, HEX, #4-40, SS, NM
3	HI01	1	INSULATOR, THERMALLY CONDUCTIVE
2	HQ02	1	HEATSINK, LOW PROFILE, T05/220
X1	XC22	1	CRYSTAL, 40 KHZ, C-2 TYPE
R8	R157	1	RES, 1.2 OHM, .5W, 5%, CF
R9	R144	1	RES, 68 OHM, .25W, CF
R11	R051	1	RES, 10 OHM, .25W, 5%, CF
R14	R022	1	RES, 20K, .25W, 5%, CF
R13	R116	1	RES, 1.8M, .25W, 5%, CF
R12	R003	1	RES, 5.1K, .25W, 5%, CF
R10	R001	1	RES, 1K, .25W, 5%, CF
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION



- NOTES:
1. WORKMANSHIP TO CONFORM TO IPC CLASS II REQUIREMENTS.
 2. USING INDELIBLE INK IN CONTRASTING COLOR, PLACE CURRENT ASSEMBLY REV. IN SPACE PROVIDED.
 3. BOARD REQUIRES SERIALIZED LABELING WITH THE FOLLOWING INFORMATION:
UNIQUE SERIAL NO., ASSEMBLY P/N & CURRENT REV. LEVEL.
PLACE SERIAL NUMBER LABEL IN THIS AREA-ORIENT AS SHOWN.
 4. ITEMS SHOWN AS SOLIDS ARE TO BE OMITTED.
 5. ADD P/N M050, LOCTITE 425 TO ALL SCREW THREADS.
 6. PLACE .38 LENGTH OF P/N M000 TAPE (ITEM 7) BETWEEN BOARD AND CRYSTAL AS SHOWN.
 7. USING P/N W004A 30 GAGE WIRE WRAP/ROLL (ITEM 8) INSTALL JUMPER BETWEEN U5-PIN 14 AND FEED THRU ON GROUND SIDE OF C6, AS SHOWN.
 8. OMIT RES POT "R15" AND USING P/N W004A JUMPER WIRE, INSTALL JUMPERS FROM TERMINATION HOLES USED FOR R15 PINS AS FOLLOWS: R15 PIN 3 (CLOSEST TO R14) TO R15 PIN 2 (R15 WIPER ADJ.) THEN JUMPER R15 PIN 2 TO R15 PIN 1 (CLOSEST TO C13).



R7,41,125	RX83	3	RES, 1K, .125W, 1%, 1206
R4,6	RX81	2	RES, 52.3K, .125W, 1%, 1206
R3,5	RX80	2	RES, 17.4K, .125W, 1%, 1206
R32-38,96	RX78	8	RES, 1.21K, .125W, 1%, 100PPM, 1206
R50,55	RX75	2	RES, 51.1K, .125W, 1%, 100PPM, 1206
R16	RX42	1	RES, 100 OHM, 5%, 25W, 200PPM, 1206
R1	RX41	1	RES, 200 OHM, .125W, 5%, 200PPM, 1206
R51,56	RX172	2	RES, 4.32K, .125W, 1%, 100PPM, 1206
R20	RX168	1	RES, 499K, .125W, 1%, 100PPM, 1206
R2	RX148	1	RES, 33.2K, .125W, 1%, 100PPM, 1206
R52,57,97-100, R103-107, R124,141,145	RX58	14	RES, 20K, .125W, 1%, 100PPM, 1206
R17	RX124	1	RES, 22M, .125W, 5%, 200PPM, 1206
R49,54	RX112	2	RES, 1.07M, .125W, 1%, 200PPM, 1206
R18,19	RX02	2	RES, 1K, .125W, 5%, 1206
R102,109	RP66	2	RES, 50K, POT, .5W, 10%
R39,138,143,144	RF52	4	RES, 20K, .125W, 1%, MF
Q1	Q026	1	D44H11 NPN SILICON POWER PAK
Q4	Q020	1	TRANSISTOR, TO-29, 2N3904, NPN
JUMP3, JUMP4	PA49	2	HEADER, UNSH, SR, RA, 2 PIN (.10)
P2	PA192	1	CONN, 6P, SR, HDR, ST, .098 CTRS
P1	PA232	1	HEADER, SHRD, SR, 11 PIN, .098
JUMP1	PA08	1	CONN, 3P, SR, HDR, ST, UNSHRS, (.10)
TP1-6	PA00	6	CONN, 1P, SR, HDR, ST, UNSHRS, (.10)
U4	IR41	1	REGULATOR, POSITIVE, LM340LAZ, T092
U20	ILX10	1	IC, OP AMP, LO-DRFT, JFET, LF412D
U1	ILX06	1	IC, 8 CH, ANA. CMOS MUX DG608ADY
U13	ILX14	1	IC, ANALOG SWITCH, 4PX2T, DG201
U26,32,42 U11,16,22	ILX01	6	IC, OP AMP, DUAL, BIFET, LF353D
U5	ICX61	1	IC, A/D CONVERTER, 16-BIT, ADS7809U
U8	ICX10	1	IC, DUAL "D" FLIP-FLOP, 74HC74
U7	ICX05	1	IC, HEX INVTR, 74HC04, S014
U2	ICX04	1	IC, OCTAL "D" FLIP-FLOP, 74HC273
U6	ICX00	1	IC, HEX INV, SCHMITT TRG, 74HC14
U3	IC03	1	IC, DIGITAL COUNTER, MC14028BCP
C10,21	CTX13	2	CAP, 2.2uF, 10%, 20V, 1510, TANT.
C3,6	CTX07	2	CAP, 10uF, 20%, 10V, 6032, TANT.
C7,41,46	CX13	3	CAP, .001uF, 10%, 50V, X7R, 1206, CER.
C59,64	CX65	2	CAP, .027uF, 10%, 50V, X7R, CER, 1206
C2,9,24,26, C28-35,37-40 C42-45,47-50	CX22	25	CAP, .1uF, 10%, 50V, X7R, CHIP CER.
C13,36	CX06	2	CAP, 10pF, 20%, 50V, COG, 1206, CER.
C5	CT22	1	CAP, 33uF, 10%, 35V, TANT.
C1,80,81,82	CT01	4	CAP, 6.8uF, 20%, 16V, TANT.
C61,66	CP44	2	CAP, 820pF, 5%, 50V, POLY.
C58,63	CP39	2	CAP, .015uF, 5%, 50V, POLY.
C14,88	CP46	2	CAP, .056uF, 5%, 50VDC, MF
C16	CP30	1	CAP, .1uF, 5%, 50V, POLY.
C4,62	CX64	2	CAP, .022uF, 10%, 50V, X7R, CER, 1206
C86,89	CP45	2	CAP, 180pF, 10%, 50V, POLY.
C22,19	CP14	2	CAP, 3.3uF, 5%, AX, POLY.
C12	CP31	1	CAP, .033uF, 5%, 50V, POLY.
C60,65	CP24	2	CAP, .0015uF, 2%, 50V, POLY.
C17	CC29	1	CAP, 2200pF, 10%, 100V, Y5F, CER.
C15,25	CC12	2	CAP, .1uF, 20%, 50V, Z5U, CER.
C18	CC07	1	CAP, 47pF, 10%, 50V, X7R, CER.
C27	CA24	1	CAP, 1uF, 20%, 50V, AL
1	B159	1	PCB, ECG ANALOG NON-ISO, 3150, REV. B
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE	DRAWN	SR	4/JUN/98
.XX = ±	DESIGNED	CN	19/SEP/95
.XXX = ±	CHECKED		
ANGLES = ±	APPROVED		
 Invo Research Inc. PRECISION BIOMEDICAL INSTRUMENTS Subsidiary of Invo Corporation 12601 RESEARCH PARKWAY, ORLANDO, FL 32826 TITLE: ASSEMBLY: AB87A PCA, ECG NON-ISO DSP, 3150			
			
DO NOT SCALE THIS DRAWING !!!		CAD SCALE	SHEET
		2 : 1	1 OF 1
		DWG. NO.	194D827
		REV.	C



- NOTES
1. WORKMANSHIP TO CONFORM TO IPC CLASS II REQUIREMENTS.
 2. USING INDELIBLE INK IN CONTRASTING COLOR, PLACE CURRENT ASSEMBLY REV. IN SPACE PROVIDED.
 3. BOARD REQUIRES SERIALIZED LABELING WITH THE FOLLOWING INFORMATION:
UNIQUE SERIAL NO., ASSEMBLY P/N & CURRENT REV. LEVEL.
PLACE SERIAL NUMBER LABEL IN THIS AREA-ORIENT AS SHOWN.
 4. ADD LOCTITE 425 (M050) AS REQUIRED, TO SCREW THREADS BEFORE INSTALLING SCREW.
 5. ADD RTV 732 CLEAR ADHESIVE (M008A) TO SECURE C11, C17, C20 AND C42 TO THE BOARD.
 6. TORQUE P/N NS26N SCREW (ITEM 3) TO 4.5 ±0.5 IN. LBS. AT Q2, Q3, Q10, U3, U5, AND U7 LOCATIONS.
 7. HAND SOLDER C47. DO NOT VAPOR DEGREASE BOARD WITH C47 COMPONENT ASSEMBLED.
HAND CLEAN ONLY AFTER SOLDERING.

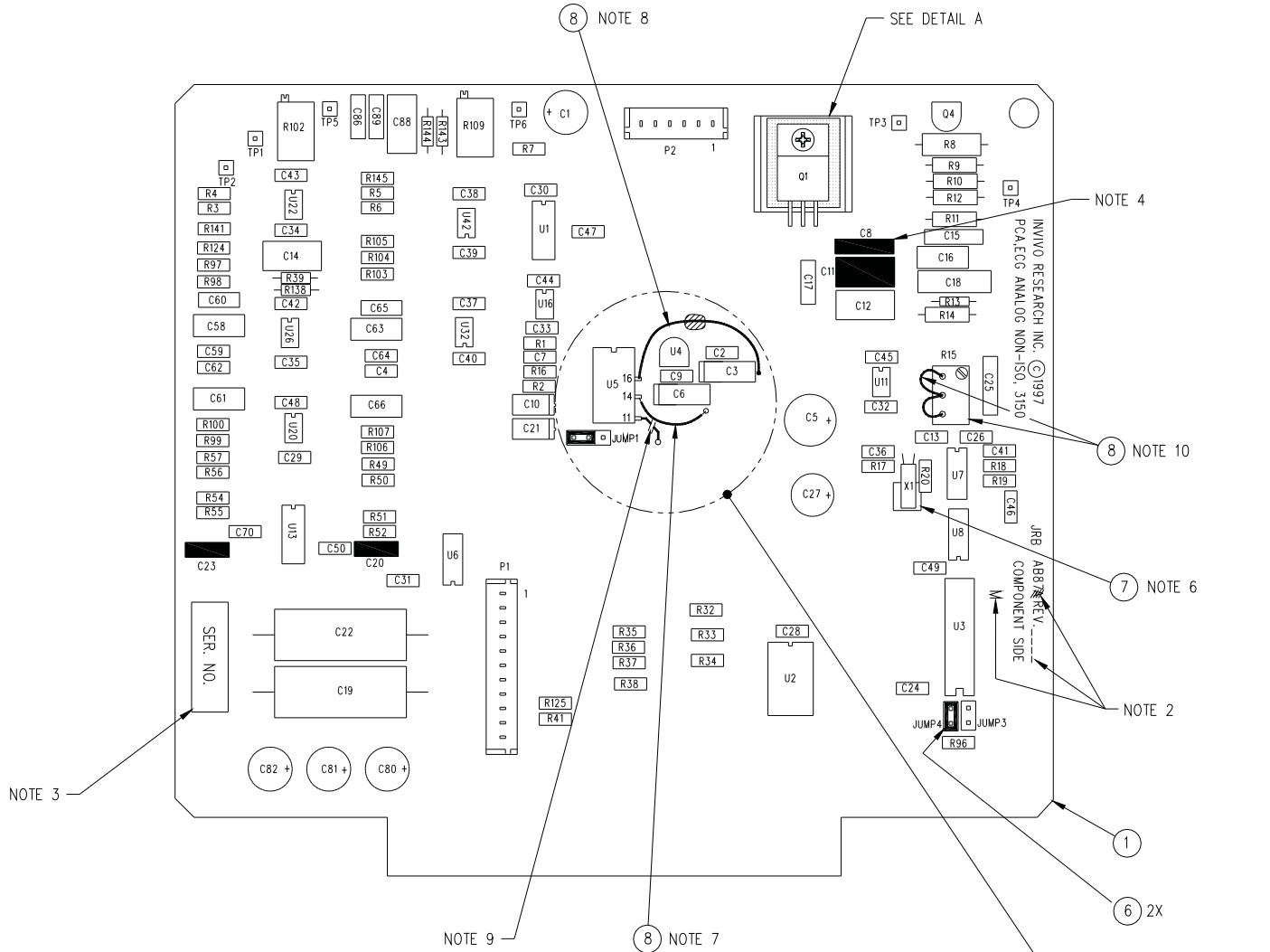
R3	RX295	1	RES, 200K, 1%, .10W, 100V, 100PPM, 0805
C44	CX80	1	CAP, 1.0uF, 10%, 16V, X5R, CER., 1206
REF.	M008A	A/R	ADHESIVE/SEALANT, RTV, CLEAR, 732
REF.	M050	A/R	ADHESIVE, LOCTITE 425, BLUE ASSURE
8	NW16	6	WASHER, NYLON, #4 X .250 X .062
7	N002N	6	NUT, HEX, #4-40, SS, NM
6	NW02	6	WASHER, NYLON, #6 X .312 X .032
5	HI01	12	INSULATOR, THERMALLY CONDUCTIVE
4	HI03	6	BUSHING, SHLDR, NYLON, .120 O.D.
3	NS26N	6	SCR, #4-40 X 3/8 LG. PHMS-XR, NM
2	HM66X	1	HEAT SINK, PWR SPLY PCB, 3150
L16,19,20,30,31	T072	5	INDUCTOR, FERRITE BEAD
L1-4	T062	4	INDUCTOR, AIR CORE, 50uH, 10%
L5-15,17,18, 21-25,27-29	T060	21	BEAD, .350 FERRITE, LEADED, 22AWG
R8	R192	1	RES, 5.1 OHM, 1W, 5%, MET.OX.
R45	RX29	1	RES, 1M, 5%, .125W, 1206
R38,40	R055	2	RES, 0.1 OHM, 1W, 5%, MO
R30	RX92	1	RES, 1.2K, .125W, 5%, 200PPM, 1206
R14	RX90	1	RES, 120 OHM, .125W, 5%, 200PPM, 1206
R7,48,50-54	RX83	7	RES, 1K, .125W, 1%, 1206
R11,12	RX17	2	RES, 100K, .125W, 1%, 1206
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION

B	RELEASED PER ECN #8006	SLC	08NOV01
A	PROTOTYPE	ALH	19JUL00
REV.	DESCRIPTION	BY	DATE
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UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:	DRAWN	SLC	08NOV01
.XX = ±	DESIGNED	SLC	08NOV01
.XXX = ±	CHECKED		
ANGLES = ±	APPROVED		
INCHES			
THIRD ANGLE PROJECTION			
DO NOT SCALE THIS DRAWING !!!			

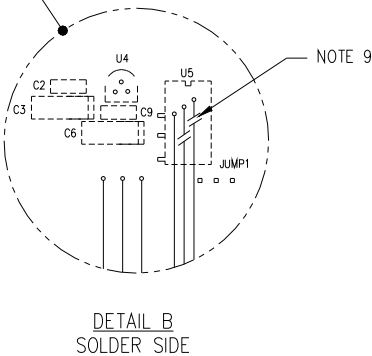
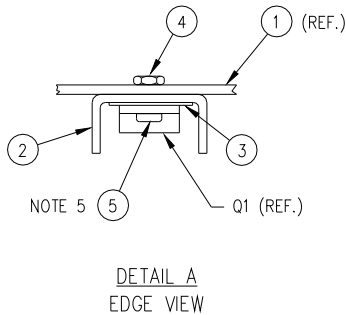
Invivo Research Inc. PRECISION BIOMEDICAL INSTRUMENTS 12601 RESEARCH PARKWAY., ORLANDO, FL 32826			
TITLE ASSEMBLY: AB152 PCA, POWER SUPPLY, 3150/M			
CAD SCALE 2 : 1	SHEET 1 OF 1	DWG. NO. 194D869	REV. B

R13	RX60	1	RES, 750 OHM, .125W, 1%, 1206
R27,41,43,44,47,49,55	RX57	7	RES, 10K, .125W, 1%, 100PPM, 1206
R39	RX54	1	RES, 240 OHM, .125W, 5%, 200PPM, 1206
R17	RX52	1	RES, 8.2K, .125W, 5%, 200PPM, 1206
R1	RX76	1	RES, 133K, 1%, .125W, 100PPM, 1206
R46	RF54	1	RES, 100 OHM, 5%, .25W, 200PPM, 1206
R10	RX42	1	RES, 3.32K.1%, .125W, MF
R32	RX21	1	RES, 20K, .125W, 5%, 200PPM, 1206
R31	RX208	1	RES, 953 OHM, .25W, 1%, 100PPM, 1206
R33	RX207	1	RES, 8.45K, 25W, 1%, 100PPM, 1206
R37	RX206	1	RES, 3.6K, .25W, 5%, 100PPM, 1206
R23	RX204	1	RES, 909 OHM, .25W, 1%, 100PPM, 1206
R21,22,34	RX370	3	RES, 470 OHM, 5%, 1.0W, 200PPM, 2512
R4	RX142	1	RES, 3.01K, .125W, 1%, 100PPM, 1206
R29	RX140	1	RES, 12.1K, .125W, 1%, 100PPM, 1206
R15	RX136	1	RES, 825 OHM, .125W, 1%, 100PPM, 1206
R9	R086A	1	RES, .56 OHM, 5%, 2W, MF
R16,20,24,28	RX02	4	RES, 1K, .125W, 5%, 1206
R35,36	RX01	2	RES, 1M, .125W, 5%, 1206
R6	RP26	1	RES, 2K POT, .5W, 10%, 20T, CER.
R26	RF39	1	RES, 1.24K, .25W, 1%, MF
R25	RF231	1	RES, 13.7K, 1%, .33W, 200V, 100PPM, MF
Q2,10	Q057	2	TRANS, PWR FET, P-CH, .15 OHM, 50V
Q3	Q026	1	D44H11 NPN SILICON POWER PAK
Q1,9	Q020	2	XSTR, TO-92, 2N3904
Q11	Q003	1	TRANS, FET, N-CHNL, TO-92, VN10KM
Q6,8	QX01	2	TRANS, PNP, SILI, S023, TYPE 2907A
Q5,7	QX00	2	TRANS, NPN, SILI, S023, TYPE 2222
Q12	Q061	1	TRANS, POWER MOSFET, IRF4905
P2	PA33	1	HEADER, UNSH, SR, 10 PIN (.10)
P1	PA343	1	CONN, 6P, SR, HDR, ST, LCK, .156 CTR
P5	PA429	1	CONN, 8P, SR, HDR, ST, LCK, .156 CTR
P6	PA337	1	CONN, 14P, SR, HDR, ST, LCK, .100 CTR.
P4,7	PA344	2	CONN, 4P SR, HDR, ST, LCK, .100 CTR
TP6	PA00	1	CONN, 1P, SR, HDR, ST, UNSHRD, (.10)
U7	IR59	1	REGULATOR, H.W. SW, ADJUST, 1070
U5,3	IR55	2	REGULATOR, ADJUST, LW DR LM2941C
VR1	IR09	1	VREG, POS., LM317LZ, T092
U4,6	IR04	2	CONVERTER, DC TO DC MC3406AP1
U1, U2	ILX11	2	IC, DUAL OP AMP, SINGLE S., LM393
D19	IR58	1	VOLT., REF, PRECISN MICROPWR, SHNT
F2	FU29	1	FUSE, 7.5 AMP, ATO, LITTLEFUSE 297
9	FU28	1	FUSE HOLDER, ATO MINI BLADE, KEYSTONE
F1	FU14	1	FUSE, 5 AMP, PICO
D9,18	D030	2	DIODE, RECTIFIER, SCHOTTKY, 7.5A,45V
D5,6,8	D031	3	DIODE, SCHOTTKY, RECT. , 3.0A, 90V
D4,7	D023	2	DIODE, GENERAL PURPOSE, 1N4007
D20	D021	1	DIODE, SCHOTTKY, SB350, ERC-81004
D10-D17	D014	8	DIODE, SCHOTTKY, RECT., 40V, 3A
D1,2,3,25,27-30,35	DDX01	9	DIODE, SIGNAL, LEADLESS, 500mW
C46	CX23	1	CAP, 1500pF, 5%, 50V, NPO, 1206, CER.
C50,54,55,57-59			
C28-33,41,43,48	CX22	28	CAP, .1uF, 10%, 50V, X7R, 1206, CER.
C18,21,23,24			
C1,3-8,12,13			
C45,49,52,53			
C15,19,40	CXT05	7	CAP, 10uF, 20%, 35V, 7343, TANT.
C47	CP20	1	CAP, 1000pF, 5%, 30V, AX, POLY.
C16	CC35	1	CAP, 2000pF, 10%, 1KV, X5F, CER.
C2	CA32	1	CAP, 100uF, 20%, 25V, MIN. AL, RAD.
C26,27	CA24	2	CAP, 1uF, 20%, 50V, AL
C11	CA18	1	CAP, 2200uF, 20%, 35V, AL
C17,20,42	CA17	3	CAP, 1000uF, 20%, 35V, ALUM
C36	CA15	1	CAP, 220uF, 20%, 35VDC, AL, RADIAL
C22	CA08	1	CAP, 22uF, 20%, 50V, AL
C14,34,51	CA04	3	CAP, 100uF, -10% +50%, 63V, AL
1	B206	1	PCB, POWER SUPPLY, 3150/M, REV. B
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION



- NOTES
1. WORKMANSHIP TO CONFORM TO IPC CLASS II REQUIREMENTS.
 2. USING INDELIBLE INK IN CONTRASTING COLOR, BLOCK OUT THE "A" IN "AB87A", ADD AN "M" NEAR "AB87A" TO DENOTE THIS PART NUMBER, AND PRINT CURRENT ASSEMBLY REV. IN SPACE PROVIDED.
 3. BOARD REQUIRES SERIALIZED LABELING WITH THE FOLLOWING INFORMATION:
UNIQUE SERIAL NO., ASSEMBLY P/N & CURRENT REV. LEVEL.
PLACE SERIAL NUMBER LABEL IN THIS AREA-ORIENT AS SHOWN.
 4. ITEMS SHOWN AS SOLIDS ARE TO BE OMITTED.
 5. ADD P/N M050, LOCTITE 425 TO ALL SCREW THREADS.
 6. PLACE .38 LENGTH OF P/N M000 TAPE (ITEM 7) BETWEEN BOARD AND CRYSTAL AS SHOWN.
 7. USING P/N W004A 30 GAGE WIRE WRAP/ROLL (ITEM 8) INSTALL JUMPER BETWEEN U5-PIN 14 AND FEED THRU ON GROUND SIDE OF C6, AS SHOWN.
 8. ADD P/N W004A JUMPER WIRE (ITEM 8) FROM U5-16 TO NEGATIVE SIDE OF C3 AND SECURE WITH M107 TAK-PAK AS SHOWN.
 9. CUT THE TRACE AT U5-11. CUT TWO TRACES ON SOLDER SIDE OF BOARD AS SHOWN IN DETAIL B.
 10. OMIT RES POT "R15" AND USING P/N W004A JUMPER WIRE, INSTALL JUMPERS FROM TERMINATION HOLES USED FOR R15 PINS AS FOLLOWS: R15 PIN 3 (CLOSEST TO R14) TO R15 PIN 2 (R15 WIPER ADJ.) THEN JUMPER R15 PIN 2 TO R15 PIN 1 (CLOSEST TO C13).

ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
8	W004A	5.00	30 GAGE WIRE WRAP/ROLL
7	M000	.38	TAPE, OPN. CL. FM, DS, .06THK X .38W
REF.	M050	A/R	ADHESIVE, LOCTITE 425, BLUE ASSURE
6	PA66	2	SHUNT, 2 POS, .10 CTRS.
5	NS26N	1	SCR, #4-40 X 3/8 LG. PHMS-XR, NM
4	N002N	1	NUT, HEX, #4-40, SS, NM
3	HI01	1	INSULATOR, THERMALLY CONDUCTIVE
2	HQ02	1	HEATSINK, LOW PROFILE, T05/220
X1	XC22	1	CRYSTAL, 40 KHZ, C-2 TYPE
R8	R157	1	RES, 1.2 OHM, .5W, 5%, CF
R9	R144	1	RES, 68 OHM, .25W, CF
R11	R051	1	RES, 10 OHM, .25W, 5%, CF
R14	R022	1	RES, 20K, .25W, 5%, CF
R13	R116	1	RES, 1.8M, .25W, 5%, CF
R12	R003	1	RES, 5.1K, .25W, 5%, CF
R10	R001	1	RES, 1K, .25W, 5%, CF
R7,41,125	RX83	3	RES, 1K, .125W, 1%, 1206
R4,6	RX81	2	RES, 52.3K, .125W, 1%, 1206
R3,5	RX80	2	RES, 17.4K, .125W, 1%, 1206



REV.	DESCRIPTION	BY	DATE
A	RELEASED, ECN #8104	SR	10NOV00
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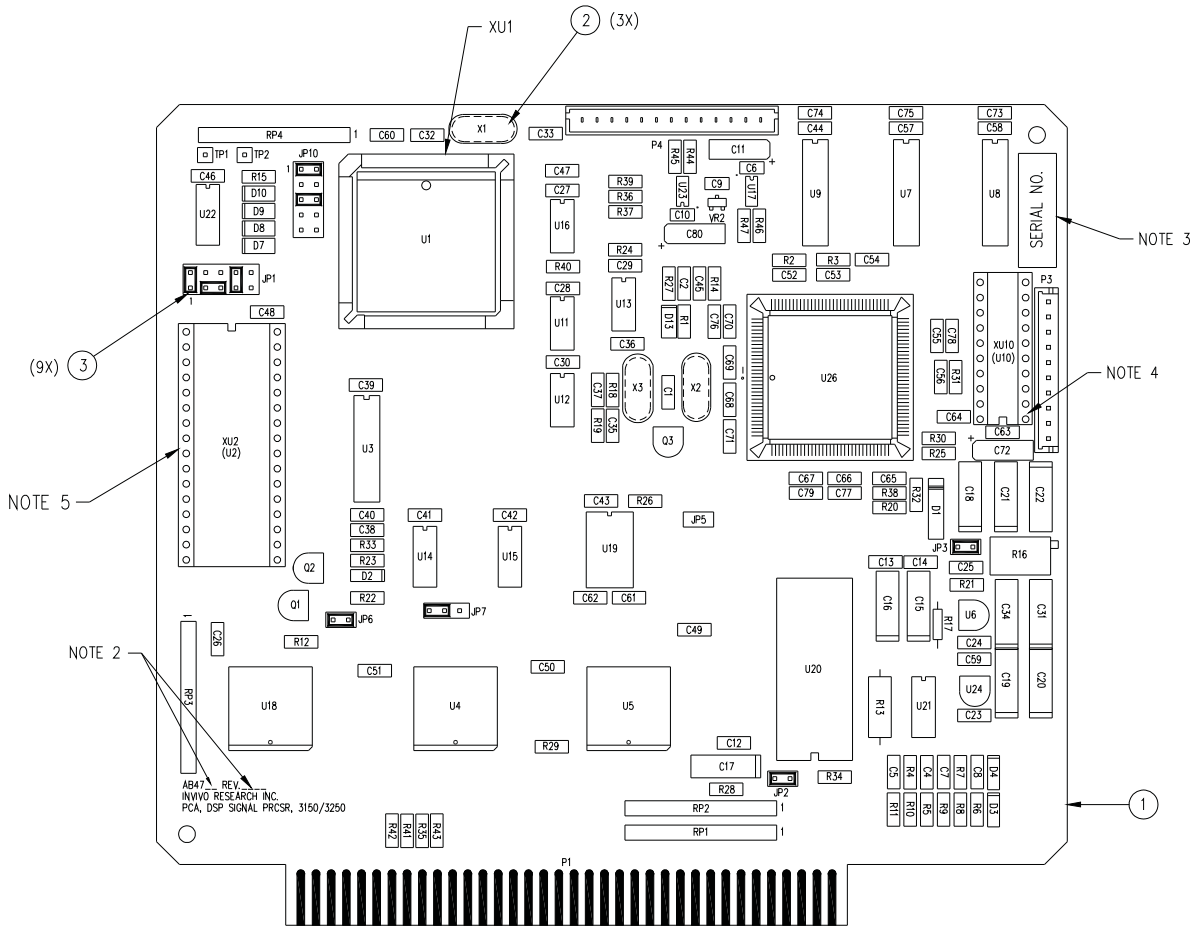
R32-38,96	RX78	8	RES, 1.21K, .125W, 1%, 100PPM, 1206
R50,55	RX75	2	RES, 51.1K, .125W, 1%, 100PPM, 1206
R16	RX42	1	RES, 100 OHM, 5%, 25W, 200PPM, 1206
R1	RX41	1	RES, 200 OHM, .125W, 5%, 200PPM, 1206
R51,56	RX172	2	RES, 4.32K, .125W, 1%, 100PPM, 1206
R20	RX168	1	RES, 499K, .125W, 1%, 100PPM, 1206
R2	RX148	1	RES, 33.2K, .125W, 1%, 100PPM, 1206
R52,57,97-100, R103-107, R124,141,145	RX58	14	RES, 20K, .125W, 1%, 100PPM, 1206
R17	RX124	1	RES, 22M, .125W, 5%, 200PPM, 1206
R49,54	RX112	2	RES, 1.07M, .125W, 1%, 200PPM, 1206
R18,19	RX02	2	RES, 1K, .125W, 5%, 1206
R102,109	RP66	2	RES, 50K, POT, .5W, 10%
R39,138,143,144	RF52	4	RES, 20K, .125W, 1%, MF
Q1	Q026	1	D44H11 NPN SILICON POWER PAK
Q4	Q020	1	TRANSISTOR, TO-29, 2N3904, NPN
JUMP3, JUMP4	PA49	2	HEADER, UNSH, SR, RA, 2 PIN (.10)
P2	PA192	1	CONN, 6P, SR, HDR, ST, .098 CTRS
P1	PA232	1	HEADER, SHRD, SR, 11 PIN, .098
JUMP1	PA08	1	CONN, 3P, SR, HDR, ST, UNSHRS, (.10)
TP1-6	PA00	6	CONN, 1P, SR, HDR, ST, UNSHRS, (.10)
U4	IR41	1	REGULATOR, POSITIVE LM340LAZ, TO92
U20	ILX10	1	IC, OP AMP, LO-DRFT., JFET, LF412D
U1	ILX06	1	IC, 8 CH, ANA. CMOS MUX DG508ADY
U13	ILX14	1	IC, ANALOG SWITCH, 4PX2T, DG201
U26,32,42	ILX01	6	IC, OP AMP, DUAL, BIFET, LF353D
U11,16,22	ICX61	1	IC, A/D CONVERTER, 16-BIT, ADS7809U
U5	ICX61	1	IC, A/D CONVERTER, 16-BIT, ADS7809U
U8	ICX10	1	IC, DUAL "D" FLIP-FLOP, 74HC74
U7	ICX05	1	IC, HEX INVRTR, 74HC04, S014
U2	ICX04	1	IC, OCTAL "D" FLIP-FLOP, 74HC273
U6	ICX00	1	IC, HEX INV, SCHMITT TRG, 74HC14
U3	IC03	1	IC, DIGITAL COUNTER, MC14028BCP
C10,21	CXT13	2	CAP, 2.2uF, 10%, 20V, 1510, TANT.
C3,6	CXT07	2	CAP, 10uF, 20%, 10V, 6032, TANT.
C7,41,46	CX13	3	CAP, .001uF, 10%, 50V, X7R, 1206, CER.
C59,64	CX65	2	CAP, .027uF, 10%, 50V, X7R, CER, 1206
C2,9,24,26, C28-35,37-40	CX22	25	CAP, .1uF, 10%, 50V, X7R, CHIP CER.
C42-45,47-50			
C70	CX06	2	CAP, 10pF, 20%, 50V, COG, 1206, CER.
C13,36			
C5	CT22	1	CAP, 33uF, 10%, 35V, TANT.
C1,80,81,82	CT01	4	CAP, 6.8uF, 20%, 16V, TANT.
C61,66	CP44	2	CAP, 820pF, 5%, 50V, POLY.
C58,63	CP39	2	CAP, .015uF, 5%, 50V, POLY.
C14,88	CP46	2	CAP, .056uF, 5%, 50VDC, MF
C16	CP30	1	CAP, .1uF, 5%, 50V, POLY.
C4,62	CX64	2	CAP, .022uF, 10%, 50V, X7R, CER, 1206
C86,89	CP45	2	CAP, 180pF, 10%, 50V, POLY.
C22,19	CP14	2	CAP, 3.3uF, 5%, AX, POLY.
C12	CP31	1	CAP, .033uF, 5%, 50V, POLY.
C60,65	CP24	2	CAP, .0015uF, 2%, 50V, POLY.
C17	CC29	1	CAP, 2200pF, 10%, 100V, Y5F, CER.
C15,25	CC12	2	CAP, .1uF, 20%, 50V, Z5U, CER.
C18	CC07	1	CAP, 47pF, 10%, 50V, X7R, CER.
C27	CA24	1	CAP, 1uF, 20%, 50V, AL
1	B159	1	PCB, ECG ANALOG NON-ISO, 3150, REV. B

ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
A	RELEASED, ECN #8104	SR	10NOV00
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:			
.XX = ±	DRAWN	SR	8NOV00
.XXX = ±	DESIGNED	MC	31OCT00
ANGLES = ±	CHECKED		
	APPROVED		
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Invivo Research Inc.
PRECISION BIOMEDICAL INSTRUMENTS
Subsidiary of Invivo Corporation
12601 RESEARCH PARKWAY., ORLANDO, FL 32826

TITLE: ASSEMBLY: AB87M
PCA, ECG NON-ISO DSP, 3150M

CAD SCALE: 2 : 1 SHEET: 1 OF 1 DWG. NO.: 194D892 REV: A



NOTES:

1. WORKMANSHIP TO CONFORM TO IPC CLASS II REQUIREMENTS.
2. USING INDELIBLE INK IN CONTRASTING COLOR, ADD AN "M" AFTER "AB47" TO DENOTE THIS PART NUMBER AND PLACE CURRENT ASSEMBLY REVISION IN SPACE PROVIDED.
3. BOARD REQUIRES SERIALIZED LABELING WITH THE FOLLOWING INFORMATION:
UNIQUE SERIAL NO., ASSEMBLY P/N & CURRENT REV. LEVEL.
PLACE SERIAL NUMBER LABEL IN THIS AREA-ORIENT AS SHOWN.
4. U10 (AM58) TO BE INSTALLED AT ELECTRONICS ASSEMBLY LEVEL.
5. U2 (AM57AM) TO BE INSTALLED AT TOP LEVEL ASSEMBLY OF 3150M MAGNITUDE (DWG# 197C619).

R46	RX61	1	RES., 30.1K, 1%, .125W, 100PPM, 1206
R44	RX57	1	RES., 10K, 1%, .125W, 100PPM, 1206
R45	RX196	1	RES., 40.2K, 1%, .125W, 100PPM, 1206
VR2	ILX33	1	IC, VREF., 2.5V, LOW-PWR, MAX6002, SOT-23
U17	ICX104	1	IC, DAC, 14BIT, SERIAL, MAX544, S08
U23	ILX22	1	IC, OP AMP, DUAL LW. PWR., CMOS, S08
C6,9,10	CX51	3	CAP., .1uF, 10%, 50V, X7R, 0805
ITEM / REF. DES.	PART NO.	QTY.	

C11,72,80	CXT07	3	CAP, 10uF, 20%, 10V, TANT., 6032
R35,41	RX141	2	RES, 33 OHM, 5%, .125W, 200PPM, 1206
R42,43	RX08	2	RES, 4.7K, 5%, .125W, 400PPM, 1206
3	PA66	9	SHUNT, 2 POSITION, .100 CTRS
2	HI37	3	INSULATOR, CRYSTAL, MYLAR
U10	AM58	REF.	PROM SET, DSP, GAL, 3150
U2	AM57AM	REF.	PROM SET, DSP, 3150M, MAGNITUDE
XU10	P028	1	SOCKET, 20-PIN DIP, .300 CTR.
XU2	P029	1	SOCKET, 32-PIN DIP, .600 CTR.
XU1	PX00	1	SOCKET, 68 PIN PLCC SOLDERTAIL
X3	XC09	1	CRYSTAL, 3.57954 MHz
X1, X2	XC16	2	CRYSTAL, 20.000 MHz
R21	RX147	1	RES, 200 OHM, .125W, 1%, 100PPM, 1206
R1	RX110	1	RES, 680K, 5%, .25W, 200PPM, 1206
R4-11,28,29,47	RX42	12	RES, 100 OHM, 5%, .125W, 200PPM, 1206
R34,36-R40			
R22,23,26,33	RX40	15	RES, 10K, 5%, .125W, 200PPM, 1206
R2,3,12,14,20			
R27	RX23	1	RES, 1K, 5%, .125W, 200PPM, 1206
R25,30,31,32	RX21	4	RES, 20K, .125W, 5%, 200PPM, 1206
R15,24	RX19	2	RES, 2K, 5%, .125W, 200PPM, 1206
R18,19	RX00	2	RES, 100K, 5%, .125W
RP1-4	RS06	4	RESNET, 10K, SIP, 9-POS/10-PIN, CF
R16	RP25	1	RES, 200 OHM, POT, 68XR200
R17	RF87	1	RES, 499 OHM, .125W, 1%, MF
R13	R161	1	RES, 180 OHM, .5W, 5%, CF
Q2	Q018	1	TRANS, PWR FET DMOS, P-CH, VP1306
Q1,3	Q003	2	TRANS, FET, N-CHNL, TO-92, VN10KM
P3	PA272	1	CONN, 10P, SR, HDR, ST, SHRD, .098
P4	PA231	1	CONN, 13P, SR, HDR, ST, SHRD, .098
JP1,10	PA37	2	HEADER, UNSH, DR, 10 PIN, .100
JP2,3,5,6	PA49	4	HEADER, 2P, UNSH., SR, .100
JP7	PA08	1	CONN, 3P, SR, HDR, ST, UNSHRD, .100
TP1,2	PA00	2	CONN, 1P, SR, HDR, ST, UNSHRD, (.10)
U24	IR40	1	REGULATOR, NEGATIVE LM320LZ-5
U6	IR09	1	REGULATOR, POSITIVE LM317LZ
U1	INX03	1	MPU, 10 MHZ, 68P, PLCC68, 64180
U4,5,18	INX02	3	I/O, PARALLEL, 8255, CMOS, 44PLCC
U26	IMX07A	1	DIGITAL SIGNAL PRCSR., DSP56002, 66MHZ
U3,7,8,9	IMX06A	4	IC, SRAM, 28P-SOJ, AS7C256, 10NS
U21	ILX06	1	IC, 16P, MLTPLXR, CMOS ANALOG., C-CH.
U11	ICX24	1	IC, QUAD 2-INPUT NAND, 74HC00M
U14,15,22	ICX11	3	DECODER, 1 OF 8, S016, 74HC138
U13,16	ICX10	2	FLIP-FLOP, DUAL "D" S014, 74HC74
U12	ICX05	1	INVERTER, HEX, S014, 74HC04
U19	ICX04	1	FLIP-FLOP, OCTAL, "D", 74HC273
U20	IC88	1	IC, A-D CNV. 12BIT, ADC12451
D7-10,13	DDX05	5	DIODE, SCHOTTKY, 1N5711, LEADLESS
D2,3,4	DDX01	3	DIODE, SIGNAL, LEADLESS, 500mW
D1	D020	1	DIODE, SCHOTTKY, SB160, 60V, 1A, D015
C4,8	CX28	2	CAP, .015uF, 5%, 50V, X7R, 1206, CER.
C15-22,31,34	CXT02	10	CAP, 6.8uF, 20%, 35V, 7343, TANT.
C45	CX39	1	CAP, 8.2nF, 10%, 50V, X7R, 1206
C35	CX26	1	CAP, 68pF, 5%, X7R, 50V, 1206, CER.
C1,2,32,33	CX25	4	CAP, 22pF, 5%, 50V, X7R, 1206, CER.
C39-44,46-71			
C23-30,37	CX22	46	CAP, .1uF, 10%, 50V, X7R, 1206, CER.
C5,7,12-14			
C36	CX15	1	CAP, 27pF, 10%, 50V, COG, 1206, CER.
C38,73-79	CX11	8	CAP, .01uF, 10%, 50V, X7R, 1206, CER.
1	B234	1	PCB, DSP SLEW/GRAD., 3150, REV. A

ITEM / REF. DES.	DESCRIPTION	QTY.	REV.	DATE
B	PER ECN #8407	JRB	17JUL01	
A	RELEASED, ECN #8106	JRH	13NOV00	
REV.	DESCRIPTION	BY	DATE	
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ITEM / REF. DES.	PART NO.	QTY.
DRAWN	CHY	19NOV98
DESIGNED	JN	6/92
CHECKED		
APPROVED		
DO NOT SCALE THIS DRAWING !!!		

DESCRIPTION
INVIVO RESEARCH, INC.
12601 RESEARCH PARKWAY., ORLANDO, FL 32826
TITLE: ASSEMBLY: AB47M
PCA, DSP SLEW/GRAD., 3150M
CAD SCALE: 2 : 1
SHEET: 1 OF 1
DWG NO: 194D894
REV: B

3151-1 LANGUAGE OPTION 1, ENGLISH			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
6	L2056	1	LABEL, REMOTE ALARMS, 3150
31	9538	1	MANUAL, OPERATORS, PHYSIOLOGICAL MONITOR, 3150
46	L2010	1	LABEL, PRECAUTION CARD, OMNI, MRI
50	LL110	2	SALES BROCHURE, QUATRODE
54	LF243	1	FORM, PRICE LIST, ACCESSORIES, 3150
63			
64	L2096	1	OVERLAY, GRAPHICS, 3150/M

3151-2 LANGUAGE OPTION 2, GERMAN			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
6	L2056G	1	LABEL, REMOTE ALARMS, 3150, GERMAN
31	9538G	1	MANUAL, OPERATORS, 3150, GERMAN
46	L2010G	1	LABEL, PRECAUTION CARD, OMNI, MRI, GERMAN
58	L2090G	1	LABEL, CAUTION, 5000G LINE, 3150, GERMAN
59	L2091	1	LABEL, MRI GATING, 3150
60	L2092G	1	LABEL, ETC02 WASTEGAS EXHAUST, 3150, GERMAN
61	L2093G	1	LABEL, I/O CHARGER PORT, 3150, GERMAN
62	L2094G	1	LABEL, RF ANTENNA, 3150, GERMAN
63			
64	L2096G	1	OVERLAY, GRAPHICS, 3150/M, GERMAN

3151-3 LANGUAGE OPTION 3, FRENCH			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
6	L2056F	1	LABEL, REMOTE ALARMS, 3150, FRENCH
31	9538F	1	MANUAL, OPERATORS, 3150, FRENCH
46	L2010F	1	LABEL, PRECAUTION CARD, OMNI, MRI, FRENCH
58	L2090F	1	LABEL, CAUTION, 5000G LINE, 3150, FRENCH
59	L2091	1	LABEL, MRI GATING, 3150
60	L2092F	1	LABEL, ETC02 WASTEGAS EXHAUST, 3150, FRENCH
61	L2093F	1	LABEL, I/O CHARGER PORT, 3150, FRENCH
62	L2094F	1	LABEL, RF ANTENNA, 3150, FRENCH
63			
64	L2096F	1	OVERLAY, GRAPHICS, 3150/M, FRENCH

3151-4 LANGUAGE OPTION 4, SPANISH			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
6	L2056S	1	LABEL, REMOTE ALARMS, 3150, SPANISH
31	9538S	1	MANUAL, OPERATORS, 3150, SPANISH
46	L2010S	1	LABEL, PRECAUTION CARD, OMNI, MRI, SPANISH
58	L2090S	1	LABEL, CAUTION, 5000G LINE, 3150, SPANISH
59	L2091	1	LABEL, MRI GATING, 3150
60	L2092S	1	LABEL, ETC02 WASTEGAS EXHAUST, 3150, SPANISH
61	L2093S	1	LABEL, I/O CHARGER PORT, 3150, SPANISH
62	L2094S	1	LABEL, RF ANTENNA, 3150, SPANISH
63			
64	L2096S	1	OVERLAY, GRAPHICS, 3150/M, SPANISH

3151-5 LANGUAGE OPTION 5, ITALIAN			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
6	L2056I	1	LABEL, REMOTE ALARMS, 3150, ITALIAN
31	9538I	1	MANUAL, OPERATORS, 3150, ITALIAN
46	L2010I	1	LABEL, PRECAUTION CARD, OMNI, MRI, ITALIAN
58	L2090I	1	LABEL, CAUTION, 5000G LINE, 3150, ITALIAN
59	L2091	1	LABEL, MRI GATING, 3150
60	L2092I	1	LABEL, ETC02 WASTEGAS EXHAUST, 3150, ITALIAN
61	L2093I	1	LABEL, I/O CHARGER PORT, 3150, ITALIAN
62	L2094I	1	LABEL, RF ANTENNA, 3150, ITALIAN
63			
64	L2096I	1	OVERLAY, GRAPHICS, 3150/M, ITALIAN

3151-6 LANGUAGE OPTION 6, DUTCH			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
6	L2056NL	1	LABEL, REMOTE ALARMS, 3150, DUTCH
31	9538NL	1	MANUAL, OPERATORS, 3150, DUTCH
46	L2010NL	1	LABEL, PRECAUTION CARD, OMNI, MRI, DUTCH
58	L2090NL	1	LABEL, CAUTION, 5000G LINE, 3150, DUTCH
59	L2091	1	LABEL, MRI GATING, 3150
60	L2092NL	1	LABEL, ETC02 WASTEGAS EXHAUST, 3150, DUTCH
61	L2093NL	1	LABEL, I/O CHARGER PORT, 3150, DUTCH
62	L2094NL	1	LABEL, RF ANTENNA, 3150, DUTCH
63			
64	L2096NL	1	OVERLAY, GRAPHICS, 3150/M, DUTCH

3151-7 LANGUAGE OPTION 7, PORTUGUESE			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
6	L2056P	1	LABEL, REMOTE ALARMS, 3150, PORTUGUESE
31	9538P	1	MANUAL, OPERATORS, 3150, PORTUGUESE
46	L2010P	1	LABEL, PRECAUTION CARD, OMNI, MRI, PORTUGUESE
58	L2090P	1	LABEL, CAUTION, 5000G LINE, 3150, PORTUGUESE
59	L2091	1	LABEL, MRI GATING, 3150
60	L2092P	1	LABEL, ETC02 WASTEGAS EXHAUST, 3150, PRT.
61	L2093P	1	LABEL, I/O CHARGER PORT, 3150, PORTUGUESE
62	L2094P	1	LABEL, RF ANTENNA, 3150, PORTUGUESE
63			
64	L2096P	1	OVERLAY, GRAPHICS, 3150/M, PORTUGUESE

3151-8 LANGUAGE OPTION 8, DANISH			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
6	L2056D	1	LABEL, REMOTE ALARMS, 3150, DANISH
31	9538D	1	MANUAL, OPERATORS, 3150, DANISH
46	L2010D	1	LABEL, PRECAUTION CARD, OMNI, MRI, DANISH
58	L2090D	1	LABEL, CAUTION, 5000G LINE, 3150, DANISH
59	L2091	1	LABEL, MRI GATING, 3150
60	L2092D	1	LABEL, ETC02 WASTEGAS EXHAUST, 3150, DANISH
61	L2093D	1	LABEL, I/O CHARGER PORT, 3150, DANISH
62	L2094D	1	LABEL, RF ANTENNA, 3150, DANISH
63			
64	L2096D	1	OVERLAY, GRAPHICS, 3150/M, DANISH

3151-9 LANGUAGE OPTION 9, NORWEGIAN			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
6	L2056N	1	LABEL, REMOTE ALARMS, 3150, NORWEGIAN
31	9538N	1	MANUAL, OPERATORS, 3150, NORWEGIAN
46	L2010N	1	LABEL, PRECAUTION CARD, OMNI, MRI, NORWEGIAN
58	L2090N	1	LABEL, CAUTION, 5000G LINE, 3150, NORWEGIAN
59	L2091	1	LABEL, MRI GATING, 3150
60	L2092N	1	LABEL, ETC02 WASTEGAS EXHAUST, 3150, NOR.
61	L2093N	1	LABEL, I/O CHARGER PORT, 3150, NORWEGIAN
62	L2094N	1	LABEL, RF ANTENNA, 3150, NORWEGIAN
63			
64	L2096N	1	OVERLAY, GRAPHICS, 3150/M, NORWEGIAN

3151-10 LANGUAGE OPTION 10, SWEDISH			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
6	L2056SW	1	LABEL, REMOTE ALARMS, 3150, SWEDISH
31	9538SW	1	MANUAL, OPERATORS, 3150, SWEDISH
46	L2010SW	1	LABEL, PRECAUTION CARD, OMNI, MRI, SWEDISH
58	L2090SW	1	LABEL, CAUTION, 5000G LINE, 3150, SWEDISH
59	L2091	1	LABEL, MRI GATING, 3150
60	L2092SW	1	LABEL, ETC02 WASTEGAS EXHAUST, 3150, SWEDISH
61	L2093SW	1	LABEL, I/O CHARGER PORT, 3150, SWEDISH
62	L2094SW	1	LABEL, RF ANTENNA, 3150, SWEDISH
63			
64	L2096SW	1	OVERLAY, GRAPHICS, 3150/M, SWEDISH

				T	PER ECN #8142	SR	12DEC00	K	PER ECN #7229	KCO	15JUN99	D	PER ECN #6413	SR	27MAR98
				R	PER ECN #8120	SR	15NOV00	J	PER ECN #6962	CHY	5FEB99	C	PER ECN #6450	SR	11MAR98
Y	PER ECN #8394	SR	31AUG01	P	PER ECN #7663	CHY	27JUL00	H	PER ECN #6811	CHY	4NOV98	B	PER ECN #6308	SR	22JAN98
W	PER ECN #8137	JRH	14MAY01	N	PER ECN #7610	KCO	10JUL00	G	PER ECN #6769	SR	11SEP98	A	RELEASED, ECN #5812	SR	11/97
V	PER ECN #8182	CHY	11FEB01	M	PER ECN #7598	CHY	16FEB00	F	PER ECN #6711	JWT	06JUL98	REV.	DESCRIPTION	BY	DATE
U	PER ECN #7660	CHY	23JAN01	L	PER ECN #7252	CHY	19JUL99	E	PER ECN #6594	CHY	19MAY98				
REV.	DESCRIPTION	BY	DATE	REV.	DESCRIPTION	BY	DATE	REV.	DESCRIPTION	BY	DATE				

REF. ASSEMBLY INSTRUCTION AI050
REF. INTERCONNECT DIAGRAM C90D056

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(NOT SHOWN)

(NOT SHOWN)
(NOT SHOWN)

(NOT SHOWN)
(NOT SHOWN)

(NOT SHOWN)

67			
66			
65			
64	SEE CHART	—	OVERLAY, GRAPHICS, 3150/M
63	NW37N	4	WASHER, 1/4 X .625 X .080, SS, NM
62	SEE CHART	—	LABEL, RF ANTENNA, 3150
61	SEE CHART	—	LABEL, I/O CHARGER PORT, 3150
60	SEE CHART	—	LABEL, ETC02 WASTEGAS EXHAUST, 3150
59	SEE CHART	—	LABEL, MRI GATING, 3150
58	SEE CHART	—	LABEL, CAUTION, 5000G LINE, 3150
57	LL62A	1	CATALOG, MRI MONITORING SUPPLIES
56	H013	2	CONDUCTIVE CAP CEC-10, BLACK
55	M098	1	BOX, MULTI-OPTH, 11.25 x 8.75 x 6.00
54	SEE CHART	—	FORM, PRICE LIST, ACCESSORIES, 3150
53	9456	1	KIT, BASKET, POLE MOUNT, MRI
52	L2069	2	LABEL, COLUMN INSERTION
51	LL122	1	FORM, INSTALLATION CONFIRMATION, 3150
50	SEE CHART	—	SALES BROCHURE, QUATRODE
49	L185	1	LABEL, DATE OF MANUFACTURE
48	M005	3	CAP, RED, .281 X .500
47	NW11N	26	WASHER, FLAT, #6 X .312 X .048, SS, NM
46	SEE CHART	—	LABEL, PRECAUTION CARD, OMNI, MRI
45	AN08V	1	CUFF, DISP, SIZE A, B, C
44	9392	1	ECG ELECTRODE IMPEDANCE METER
43	L174	REF.	LABEL, COMPUTER PRINTABLE, 3.50 X .94
42	M182	1	BOX, 6 X 3 X 3
41	L1016C	1	LABEL, GENERIC SERIAL
40	L137A	1	LABEL, CE COMPLIANCE, MDD (SEMKO)
39	L014	1	LABEL, ACCEPTED W02
38	M184	1	TUBE, SNAP SEAL, 1.00 I.D. X 9.00 LG.
37	M173	1	BOX, 22.63 x 14.63 X 5.00
36	M170C	1	INSERT, BOTTOM, SHIPPING BOX, 3150
35	M170B	1	INSERT, MIDDLE, SHIPPING BOX, 3150
34	M170A	1	INSERT, TOP, SHIPPING BOX, 3150
33	M170	1	BOX, SHIPPING, 3150
32	M082	4 FT.	BBL.WRP, ANTI-STAT, 12" WD, 319BBL
31	SEE CHART	—	MANUAL, OPERATORS, PHYSIOLOGICAL MONITOR, 3150
30	9367	1	OXICLIP MRI FINGER SENSOR
29	LL126	1	INSTR. SHT., 3150 MRI ASSY. INSTR.
28	9303A	1	STARTER KIT, QUADTRODE, 10/PAK
27	9240	1	CABLE, ECG/LEAD WIRES, MRI
26	9070M	1	CUFF, ADULT, TAPER FIT, MRI
25	9060M	1	CUFF, CHILD, TAPER FIT, MRI
24	9050M	1	CUFF, INFANT, TAPER FIT, MRI
23	9010NM	1	HOSE, NEONATAL, 18', MRI
22	9010M	1	HOSE, ADULT, TWIN LUMEN, 18', MRI
21	9009	1	GEL, ECG/EEG, SKIN PREP, TUBE
20	9029	1	POLE, IV, NON-MAGNETIC
19	M050	A/R	ADHESIVE, LOCTITE, 425, BLUE, ASSURE
18	M001B	1	BAG, ZIPLOCK, 6 X 6 X 1.15 MIL.
17	NW43N	26	WASHER, LOCK, SPLIT, #6 X .250 X .031, SS, NM
16	NW42N	4	WASHER, LOCK, SPLIT, 3/8 X .683 X .094, SS, NM
15	NW41N	4	WASHER, LOCK, SPLIT, 1/4 X .489 X .062, SS, NM
14	HP107	1	FILTER, 13mm, 1.0µm HYDROPHOBIC, M/F
13	NS102N	4	SCR, 3/8-16 X 1.00 LG. HHMS, SS, NM
12	NS147N	4	SCR, 1/4-20 X 1.12 LG. HHMS, SS, NM
11	NS117	2	KNOB, BAR, 1/4 -20 X .75 LG.
10	N003N	6	NUT, HEX, #8-32, SS, NM
9	NS06N	26	SCR, #6-32 X 1/2 LG. PHMS-XR, SS, NM
8	H120	70.00	GASKET, EMI, SOFT SHIELD, .157W X .039H, PSA TAPE
7	HM66BB	1	PANEL, TOP, 3150
6	SEE CHART	—	LABEL, REMOTE ALARMS, 3150
5	HM66T	1	HANDLE BAR, 3150
4	HM66AF	1	FLANGE, MRI POLE, 3150
3			
2	AS147A	1	ASSY, COLUMN, 3150
1	AS144A	1	ASSY, BASE, 3150

ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:			
.XX = ±	DESIGNED	SR	12AUG97
.XXX = ±	CHECKED	RLM	3JAN97
ANGLES = ±	APPROVED		
DRAWN			
THIRD ANGLE PROJECTION			
DO NOT SCALE THIS DRAWING !!!			

 **Invivo Research Inc.**
PRECISION BIOMEDICAL INSTRUMENTS
Subsidiary of Invivo Corporation
12601 RESEARCH PARKWAY., ORLANDO, FL 32826

TITLE: ASSEMBLY: 3150
MONITOR, PATIENT, MRI
CAD SCALE: 1 : 1
SHEET: 1 of 5
DWG. NO.: 197C534
REV: Y

3152-1 VOLTAGE OPTION 1, 110V			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
100	AS153	1	POWER ADAPTER, 3150
101	AS18	1	ASSY, LINE CORD, 110V, TESTED
102	FU13	2	FUSE, 3/4 AMP, SLO-BLO, 313.750
103	AC348	1	CABLE, POWER ADAPTER, 3150, 25 FT.
105	HH08	2	HOOK, PLASTIC, RECT., WHITE, SUPER

3152-2 VOLTAGE OPTION 2, 220V EURO/GERMAN			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
100	AS153	1	POWER ADAPTER, 3150
101	AS18G	1	ASSY, LINE CORD, 10A/220-230V, EURO.
102	FU25	2	FUSE, 4/10 AMP, 250V, SLO-BLO, 3AG
103	AC348	1	CABLE, POWER ADAPTER, 3150, 25 FT.
105	HH08	2	HOOK, PLASTIC, RECT., WHITE, SUPER

3152-3 VOLTAGE OPTION 3, 220V UNIVERSAL			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
100	AS153	1	POWER ADAPTER, 3150
101	AS18A	1	ASSY, LINE CORD, 220V, TESTED
102	FU25	2	FUSE, 4/10 AMP, 250V, SLO-BLO, 3AG
103	AC348	1	CABLE, POWER ADAPTER, 3150, 25 FT.
105	HH08	2	HOOK, PLASTIC, RECT., WHITE, SUPER

3152-4 VOLTAGE OPTION 4, 100V			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
100	AS153J	1	POWER ADAPTER, 3150
101	AS18A	1	ASSY., LINE CORD, 220V, TESTED
102	FU13	2	FUSE, 3/4 AMP, SLO-BLO, 313.750
103	AC348	1	CABLE, POWER ADAPTER, 3150, 25 FT.
105	HH08	2	HOOK, PLASTIC, RECT., WHITE, SUPER

3154-1 INVASIVE PRESSURES OPTION 1, DUAL (2)			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
56	H013	-2	CONDUCTIVE CAP CEC-10, BLACK
106	9390K	1	HOOK, PLASTIC, RECT., WHITE, SUPER
124	AB89	1	PCA, INVASIVE PRESS., ISO, 3150
125	AB90	1	PCA, INVASIVE PRESS., NON-ISO, 3150
126	HI51	1	INSULATOR, INVASIVE PRESS. PCA, 3150
127	HS51	2	STANDOFF, .25 HEX, M/F, #6-32 X .38, BR.
128	NS02N	3	SCR., #6-32 X 1/4 LG., PHMS-XR, NM

SEE NOTE 6, SHT 3

3155-1 ETC02 OPTION 1, ETC02 (mmHg)			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
110	AS156	1	ASSY, ETC02 PNEUMATICS CONTROLLER, 3150
111	HP86A	1	LUER LOCK, MALE, MALE THD, 1/4-28
112	HP87A	1	LUER LOCK, FEMALE, FEMALE THD, 1/4-28
113	ED06	1	TUBE, NAFION, ME DRYER, 12"
114	HP102	1	ADAPTER, LUER LOCK, F/F
115	9010D	3	ETC02 SAMPLING KIT, 20 FT.
116	9012	3	CANNULA, DISP., ADULT (4000F)
117	9013	2	CANNULA, DISP., PED. (4100F)
118	9014	2	CANNULA, DISP., INFANT (4200F)
119	9015	2	CANNULA, DISP., INT. INF. (4300F)
N/A	AP45	(-1)	PNEU. ASSY, 3150
N/A	AP45A	1	PNEU. ASSY, ETC02, 3150
120	AC358	1	CAB, DSP/CO2 INTERCONNECT
121	AC359	1	CAB, PNEUMATIC ASSY-CO2 BD
122	AM60	1	PROM SET, ETC02 PNEUMATICS CONTROLLER
123	NS76N	2	SCR, #4-40 X 3/16 LG. PHMS-XR, SS, NM
129	M198	A/R	ADHESIVE, LOCTITE 569, BROWN, PIPE SEALANT
137	9471	1	KIT, WASTE GAS SCAVENGER HOSE

3155-2 ETC02 OPTION 2, ETC02 (kPa)			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
110	AS156	1	ASSY, ETC02 PNEUMATICS CONTROLLER, 3150
			SAME PARTS LIST AS 3155-1
129	M198	A/R	ADHESIVE, LOCTITE 569, BROWN, PIPE SEALANT
137	9471	1	KIT, WASTE GAS SCAVENGER HOSE

3157-1 ANESTHETIC AGENTS OPTION 1, ANESTHETIC AGENTS			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
X	X	X	X

3150-19-01 COMM. OPTION 01, TELEM, SIEMENS			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
130	LL131	1	INSTR., INSTAL., 3150 MRI SIEMENS TELEMETRY OPT.
131	L199	1	LABEL, TELECOMMUNICATIONS LINK
132	M098	1	BOX, MLTI-DPTH, 11.25 x 8.75 x 6.00
133	9269	1	CABLE, TRANSCIEVER/ELECTRONICS, SIEMENS
134	9270	1	CABLE, GATING, 3150/PMU, SIEMENS
135	9720	1	ASSY., TRANSCIEVER MODULE, SIEMENS
37	AM67	1	PROM SET, MASTER uP, 3150/M
37	AM70	-1	PROM SET, MASTER uP, 3150/M

3150-19-02 COMM. OPTION 02, HDWIRE, ENG.			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
104	H058	1	PLUG, HOLE, .25 DIA, BLACK, NYLON
107	AC331	-1	CAB, ANTENNA, TELE, 8 INCH
108	HE61	-1	ANTENNA, 2.4 GHZ, RT. ANGLE
109	HE60	-1	TRANSCIEVER, 2.4 GHZ
136	9474	1	KIT, HARDWIRE OPTION, 3155MVS/3150
4	AB47A	-1	PCA, DSP SLEW/GRAD, 3150/M
4	AB47M	1	PCA, DSP SLEW/GRAD, 3150/M
7	AB87A	-1	PCA, ECG NON-ISO DSP, 3150
7	AB87M	1	PCA, ECG NON-ISO DSP, 3150M
3	AB119A	-1	PCA, MASTER PROC, 18 MHZ, 3150/M
3	AB119	1	PCA, MASTER PROC, 12 MHZ, 3150/M
38	AB116	-1	PCA, MRI GATING /ANALOG OPT, 3150
38	AB116M	1	PCA, MRI GATING /ANALOG OPT, 3150M
37	AM70	-1	PROM SET, MASTER uP, 3150/M
37	AM59	1	PROM SET, MASTER uP, 3150

3150-19-03 COMM. OPTION 03, HDWIRE, GER.			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
104	H058	1	PLUG, HOLE, .25 DIA, BLACK, NYLON
			SAME PARTS LIST AS 3150-19-02
37	AM59G	1	PROM SET, MASTER uP, 3150, GERMAN

3150-19-04 COMM. OPTION 04, HDWIRE, FRN.			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
104	H058	1	PLUG, HOLE, .25 DIA, BLACK, NYLON
			SAME PARTS LIST AS 3150-19-02
37	AM59F	1	PROM SET, MASTER uP, 3150, FRENCH

3150-19-05 COMM. OPTION 05, HDWIRE, SPN.			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
104	H058	1	PLUG, HOLE, .25 DIA, BLACK, NYLON
			SAME PARTS LIST AS 3150-19-02
37	AM59S	1	PROM SET, MASTER uP, 3150, SPANISH

(NOT SHOWN)

(NOT SHOWN)

(NOT SHOWN)

} REF.
P/N AS145

} REF.
P/N AS145

3150-19-06 COMM. OPTION 06, HDWIRE, ITL.			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
104	H058	1	PLUG, HOLE, .25 DIA, BLACK, NYLON
			SAME PARTS LIST AS 3150-19-02
37	AM59I	1	PROM SET, MASTER uP, 3150, ITALIAN

3150-19-07 COMM. OPTION 07, HDWIRE, PRT.			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
104	H058	1	PLUG, HOLE, .25 DIA, BLACK, NYLON
			SAME PARTS LIST AS 3150-19-02
37	AM59P	1	PROM SET, MASTER uP, 3150, PORTUGUESE

3150-19-08 COMM. OPTION 08, HDWIRE, NLS.			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
104	H058	1	PLUG, HOLE, .25 DIA, BLACK, NYLON
			SAME PARTS LIST AS 3150-19-02
37	AM59NL	1	PROM SET, MASTER uP, 3150, NLS

(NOT SHOWN)

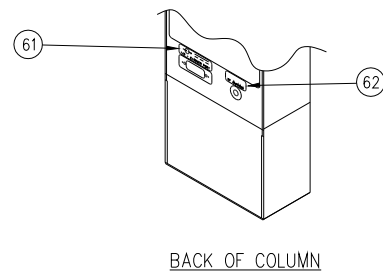
(NOT SHOWN)

137	SEE CHART	---	KIT, WASTE GAS SCAVENGER HOSE
136	SEE CHART	---	KIT, HARDWIRE OPTION, 3155MVS/3150
135	SEE CHART	---	ASSY., TRANSCIEVER MODULE, SIEMENS
134	SEE CHART	---	CABLE, GATING, 3150/PMU, SIEMENS
133	SEE CHART	---	CABLE, TRANSCIEVER/ELECTRONICS, SIEMENS
132	SEE CHART	---	BOX, MLTI-OPTH, 11.25 x 8.75 x 6.00
131	SEE CHART	---	LABEL, TELECOMMUNICATIONS LINK
130	SEE CHART	---	INSTR., INSTL., 3150 MRI SIEMENS TELEMETRY OPT.
129	SEE CHART	---	ADHESIVE, LOCTITE 569, BROWN, PIPE SEALANT
128	SEE CHART	---	SCR., #6-32 X 1/4 LG. PHMS-XR, NM
127	SEE CHART	---	STANDOFF, .25 HEX, M/F, #6-32 X .38, BR.
126	SEE CHART	---	INSULATOR, INVASIVE PRESS. PCA, 3150
125	SEE CHART	---	PCA, INVASIVE PRESS. NON-ISO, 3150
124	SEE CHART	---	PCA, INVASIVE PRESS. ISO, 3150
123	SEE CHART	---	SCR, #4-40 X 3/16 LG. PHMS-XR, SS, NM
122	SEE CHART	---	PROM SET, ETC02 PNEUMATICS CONTROLLER
121	SEE CHART	---	CAB, PNEUMATIC ASSY-CO2 BD
120	SEE CHART	---	CAB, DSP/CO2 INTERCONNECT
119	SEE CHART	---	CANNULA, DISP., INT. INF. (4300F)
118	SEE CHART	---	CANNULA, DISP., INFANT (4200F)
117	SEE CHART	---	CANNULA, DISP., PED. (4100F)
116	SEE CHART	---	CANNULA, DISP., ADULT (4000F)
115	SEE CHART	---	ETC02 SAMPLING KIT, 20 FT.
114	SEE CHART	---	ADAPTER, LUER LOCK, F/F
113	SEE CHART	---	TUBE, NAFION, ME DRYER, 12"
112	SEE CHART	---	LUER LOCK, FEMALE, FEMALE THD, 1/4-28
111	SEE CHART	---	LUER LOCK, MALE, MALE THD, 1/4-28
110	SEE CHART	---	ASSY, ETC02 PNEUMATICS CONTROLLER, 3150
109	SEE CHART	---	TRANSCIEVER, 2.4 GHZ
108	SEE CHART	---	ANTENNA, 2.4 GHZ, RT. ANGLE
107	SEE CHART	---	CAB., ANTENNA, TELE, 8 INCH
106	SEE CHART	---	CABLE ASSY, PRESSURE TRANSDUCER
105	SEE CHART	---	HOOK, PLASTIC, RECT., WHITE, SUPER
104	SEE CHART	---	PLUG, HOLE, .25 DIA, BLACK, NYLON
103	SEE CHART	---	CABLE, POWER ADAPTER, 3150, 25 FT.
102	SEE CHART	---	FUSE
101	SEE CHART	---	ASSY, LINE CORD
100	SEE CHART	---	POWER ADAPTER, 3150

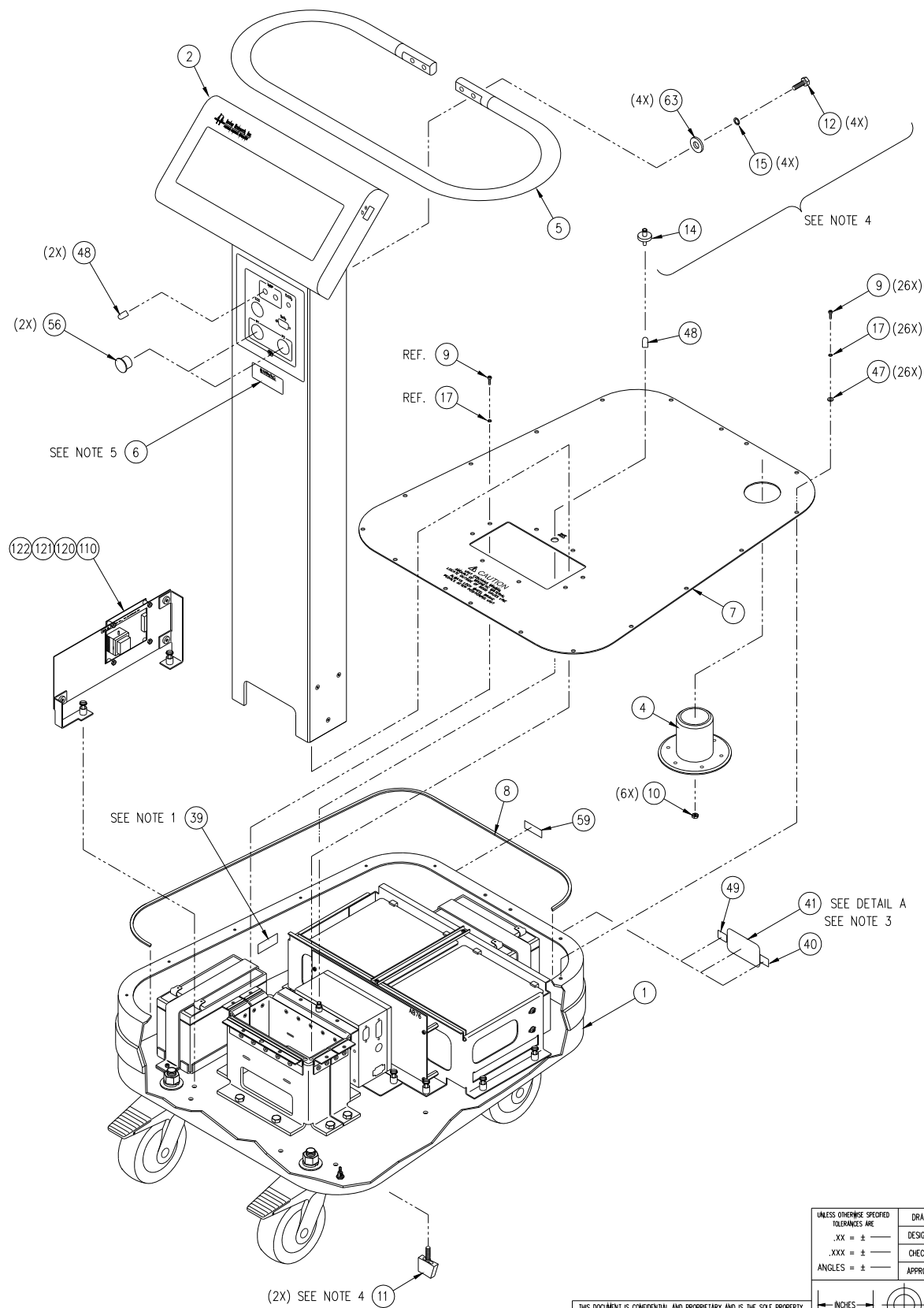
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:			
.XX = ±	DRAWN	SR	12AUG87
.XXX = ±	DESIGNED	RLM	3JUN87
ANGLES = ±	CHECKED		
	APPROVED		
Invivo Research Inc. PRECISION BIOMEDICAL INSTRUMENTS Subsidiary of Invivo Corporation			
12601 RESEARCH PARKWAY., ORLANDO, FL 32826			
TITLE: ASSEMBLY: 3150 MONITOR, PATIENT, MRI			
CAD SCALE: 1 : 1	SHEET: 2 of 5	DWG. NO: 197C534	REV: Y



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BACK OF COLUMN



(2X) (48)

(2X) 56

SEE NOTE

REF. 9

REF. (17)

(4X) (63)

15 (4X)

12) (4X)

SEE NOTE 4

9 (26X)

17 (26X)

47 (26X)

(122)(121)(120)(110)

SEE NOTE 1 (39)

8

59

④

(6X) (10) !

49

41 SEE DETAIL A
SEE NOTE 3

SEE NOTE 3.

1

(2X) SEE NOTE 4 (11)

NOTES

1. ATTACH P/N L014 ACCEPTANCE LABEL (ITEM 39) TO INSIDE WALL OF BASE, LOCATED AS SHOWN.
2. USING IMPACT PRINTER, ADD MODEL NUMBER AND PREFIX LETTER WITH FIVE DIGIT SEQUENTIAL SERIAL NUMBER.
3. ATTACH P/N L1016C SERIAL LABEL (ITEM 41) AT REAR OF BASE, CENTERED, APPROX. .250 UP FROM BOTTOM EDGE OF BASE. ATTACH P/N L137A CE LABEL (ITEM 40) AT LEFT OF SERIAL LABEL, CENTERED. ATTACH P/N L185 DATE OF MANUFACTURE LABEL (ITEM 49) AT RIGHT OF SERIAL LABEL, CENTERED.
4. ITEM 11 QTY. 2, ITEMS 12, 15 AND 63 QTY. 4 EA, AND ITEM 14 QTY. 1 TO BE PLACED IN P/N M001B ZIPLOCK BAG (ITEM 18) AND ATTACH P/N L174 COMPUTER PRINTED LABEL (ITEM 43) IDENTIFIED AS "FIELD INSTALL HARDWARE".
5. ATTACH P/N L2056 REMOTE ALARMS LABEL (ITEM 6), CENTERED AND APPROXIMATELY .06 BELOW PATIENT PANEL ASSEMBLY.
6. WHEN INSTALLING P/N 3154-1 INVASIVE PRESSURE OPTION, SEE P/N AS145 ELECTRONICS ASSY. (DWG. NO. 194C761) & P/N AS149 ISO BD'S COVER ASSY. (DWG. NO. C94D769) FOR ITEM LOCATIONS

The logo for Invivo Research Inc. is located in the bottom left corner. It features a stylized graphic of a person with arms raised, followed by the text "Invivo Research Inc." and "ORLANDO, FLORIDA 32836". Below this, there is a label with fields for "MODEL" (3150) and "SERIAL" (FXXXXX), and a "Made in U.S.A." mark. A cautionary note at the bottom of the label states: "CAUTION: Federal law in U.S.A. and Canada restricts this device to sale by or on the order of a licensed medical practitioner only."

DETAIL A
SCALE: 4:1
SEE NOTE 2

UNLESS OTHERWISE SPECIFIED
TOLERANCES ARE:

.XXX = ±

.XX = ±

.X = ±

ANGLES = ±

DRAWN

DESIGNED

CHECKED

APPROVED

SR

RLM

12AUG97

3JUN97



In vivo Research Inc.

PRECISION BIOMEDICAL INSTRUMENTS

Subsidiary of In vivo Corporation

12601 RESEARCH PARKWAY., ORLANDO, FL 32826

TITLE:

ASSEMBLY: 3150

MONITOR, PATIENT, MRI

CAD SCALE:

1 : 1

SHEET:

3 of 5

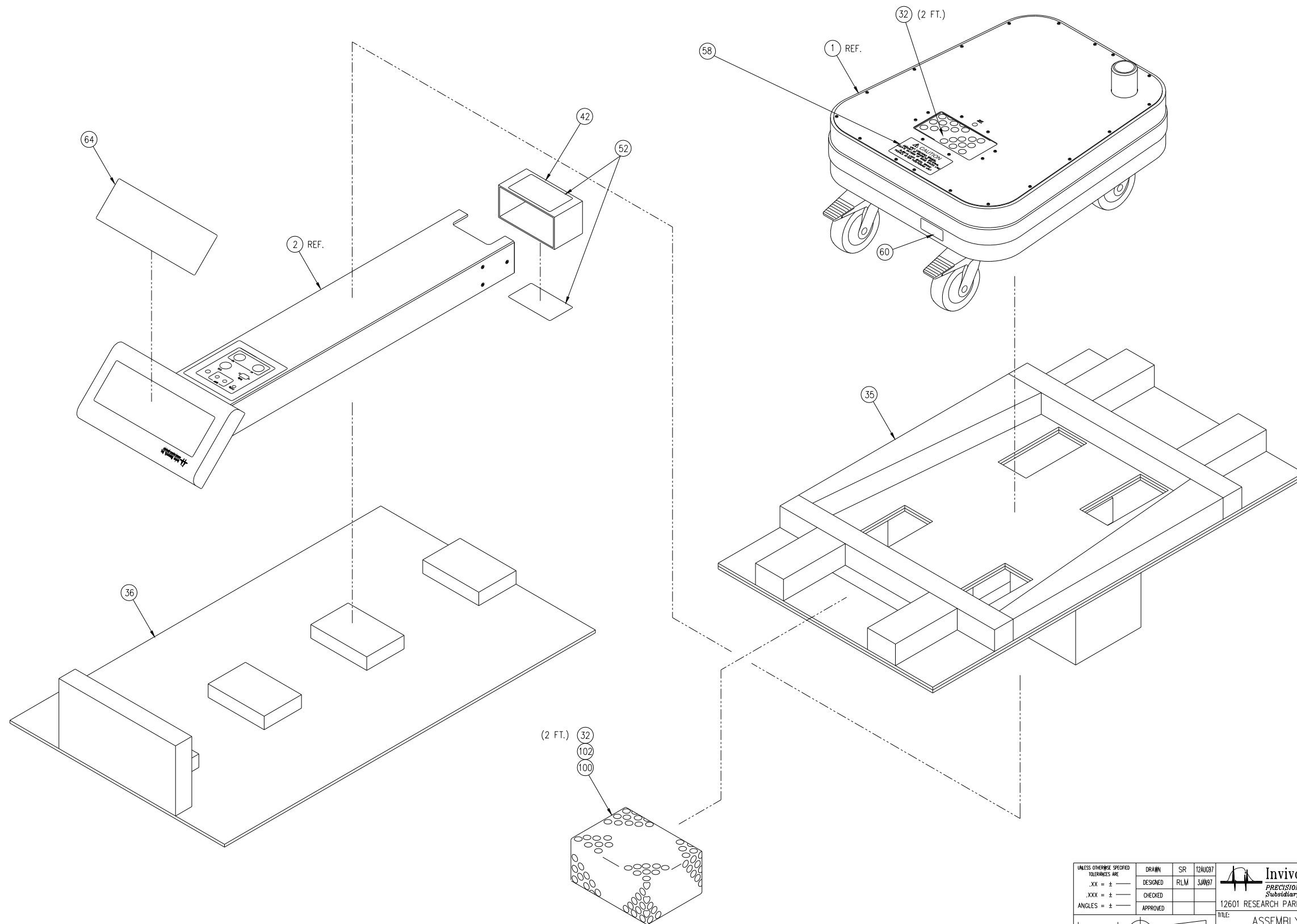
DWG. NO.:

197C534

REV:

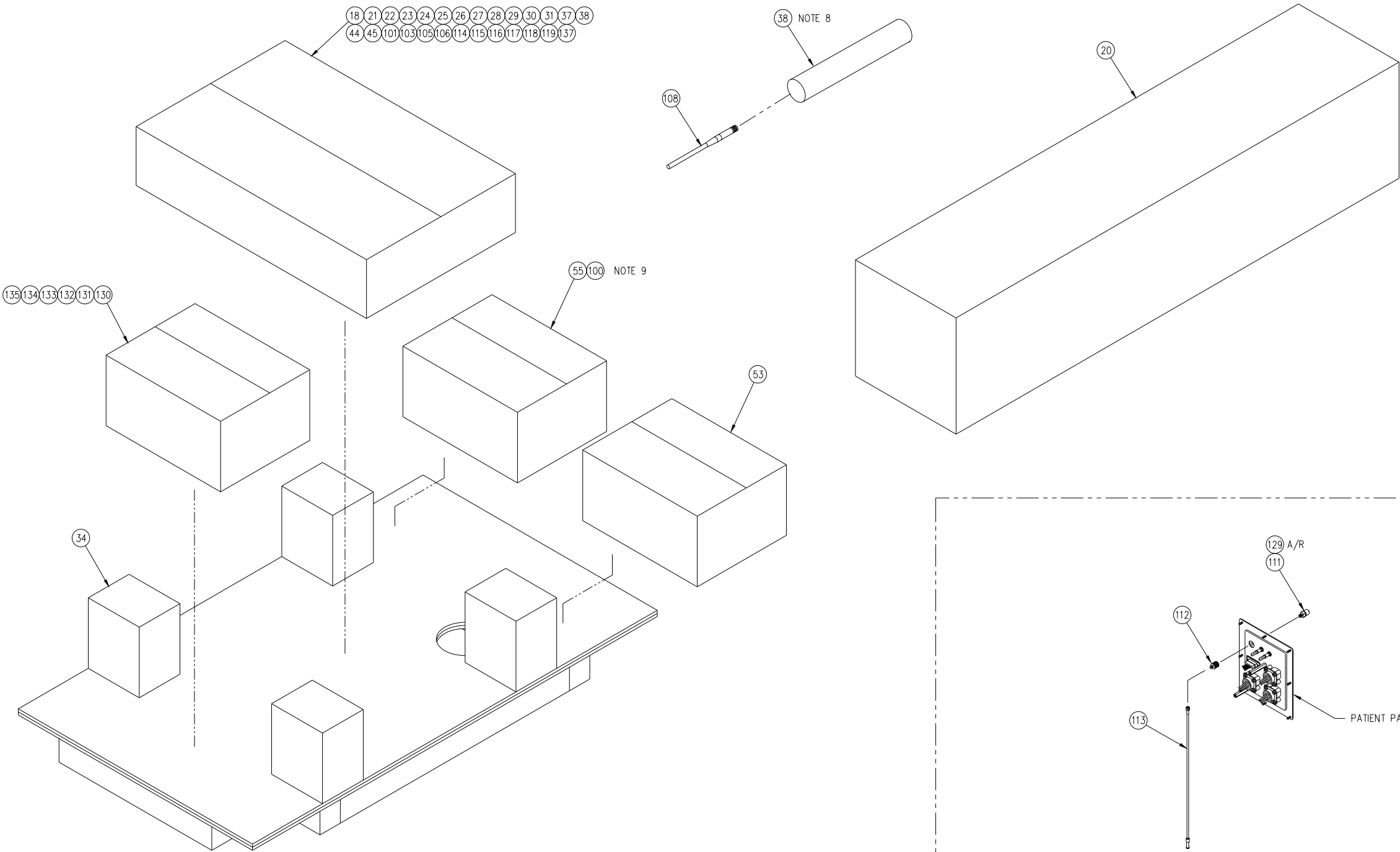
Y

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.XX = ±	DESIGNED	RLM	3JUN87	
.XXX = ±	CHECKED			
ANGLES = ±	APPROVED			TITLE: ASSEMBLY: 3150 MONITOR, PATIENT, MRI
DO NOT SCALE THIS DRAWING !!!				CAD SCALE: 1 : 1
				SHEET: 4 of 5
				DWG. NO.: 197C534
				REV: Y



- NOTES:
8. REMOVE ANTENNA FROM COLUMN AND PLACE INSIDE P/N M184 TUBE (ITEM 38), THEN PLACE INSIDE ACCESSORY BOX FOR SHIPMENT.
9. THE 3155MVS POWER ADAPTER IS ALSO PLACED IN THIS BOX.

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UNLESS OTHERWISE SPECIFIED TOLERANCES ARE: .XX = ± .XXX = ± ANGLES = ±	DRAWN	SR	12AUG87	 Invivo Research Inc. <i>PRECISION BIOMEDICAL INSTRUMENTS</i> <i>Subsidiary of Invivo Corporation</i> 12601 RESEARCH PARKWAY., ORLANDO, FL 32826
	DESIGNED	RLM	3JUN87	
	CHECKED			
	APPROVED			
TITLE: ASSEMBLY: 3150 MONITOR, PATIENT, MRI				
CAD SCALE: 1 : 1		SHEET: 5 of 5		DWG. NO.: 197C534
				REV.: Y

LF21 REV. A

3151M-1 LANGUAGE OPTION 1, ENGLISH			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
6	L2056	1	LABEL, REMOTE ALARMS, 3150
31	9538	1	MANUAL, OPERATORS, PHYSIOLOGICAL MONITOR, 3150
46	L2010	1	LABEL, PRECAUTION CARD, OMNI, MRI
50	LL110	2	SALES BROCHURE, QUATRODE
54	LF243	1	FORM, PRICE LIST, ACCESSORIES, 3150
63			
64	L2096	1	OVERLAY, GRAPHICS, 3150/M

3151M-2 LANGUAGE OPTION 2, GERMAN			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
6	L2056G	1	LABEL, REMOTE ALARMS, 3150, GERMAN
31	9538G	1	MANUAL, OPERATORS, 3150, GERMAN
46	L2010G	1	LABEL, PRECAUTION CARD, OMNI, MRI, GERMAN
58	L2090G	1	LABEL, CAUTION, 5000G LINE, 3150, GERMAN
59	L2091	1	LABEL, MRI GATING, 3150
60	L2092G	1	LABEL, ETC02 WASTEGAS EXHAUST, 3150, GERMAN
61	L2093G	1	LABEL, I/O CHARGER PORT, 3150, GERMAN
62	L2094G	1	LABEL, RF ANTENNA, 3150, GERMAN
63			
64	L2096G	1	OVERLAY, GRAPHICS, 3150/M, GERMAN

3151M-3 LANGUAGE OPTION 3, FRENCH			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
6	L2056F	1	LABEL, REMOTE ALARMS, 3150, FRENCH
31	9538F	1	MANUAL, OPERATORS, 3150, FRENCH
46	L2010F	1	LABEL, PRECAUTION CARD, OMNI, MRI, FRENCH
58	L2090F	1	LABEL, CAUTION, 5000G LINE, 3150, FRENCH
59	L2091	1	LABEL, MRI GATING, 3150
60	L2092F	1	LABEL, ETC02 WASTEGAS EXHAUST, 3150, FRENCH
61	L2093F	1	LABEL, I/O CHARGER PORT, 3150, FRENCH
62	L2094F	1	LABEL, RF ANTENNA, 3150, FRENCH
63			
64	L2096F	1	OVERLAY, GRAPHICS, 3150/M, FRENCH

3151M-4 LANGUAGE OPTION 4, SPANISH			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
6	L2056S	1	LABEL, REMOTE ALARMS, 3150, SPANISH
31	9538S	1	MANUAL, OPERATORS, 3150, SPANISH
46	L2010S	1	LABEL, PRECAUTION CARD, OMNI, MRI, SPANISH
58	L2090S	1	LABEL, CAUTION, 5000G LINE, 3150, SPANISH
59	L2091	1	LABEL, MRI GATING, 3150
60	L2092S	1	LABEL, ETC02 WASTEGAS EXHAUST, 3150, SPANISH
61	L2093S	1	LABEL, I/O CHARGER PORT, 3150, SPANISH
62	L2094S	1	LABEL, RF ANTENNA, 3150, SPANISH
63			
64	L2096S	1	OVERLAY, GRAPHICS, 3150/M, SPANISH

3151M-5 LANGUAGE OPTION 5, ITALIAN			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
6	L2056I	1	LABEL, REMOTE ALARMS, 3150, ITALIAN
31	9538I	1	MANUAL, OPERATORS, 3150, ITALIAN
46	L2010I	1	LABEL, PRECAUTION CARD, OMNI, MRI, ITALIAN
58	L2090I	1	LABEL, CAUTION, 5000G LINE, 3150, ITALIAN
59	L2091I	1	LABEL, MRI GATING, 3150
60	L2092I	1	LABEL, ETC02 WASTEGAS EXHAUST, 3150, ITALIAN
61	L2093I	1	LABEL, I/O CHARGER PORT, 3150, ITALIAN
62	L2094I	1	LABEL, RF ANTENNA, 3150, ITALIAN
63			
64	L2096I	1	OVERLAY, GRAPHICS, 3150/M, ITALIAN

3151M-6 LANGUAGE OPTION 6, DUTCH			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
6	L2056NL	1	LABEL, REMOTE ALARMS, 3150, DUTCH
31	9538NL	1	MANUAL, OPERATORS, 3150, DUTCH
46	L2010NL	1	LABEL, PRECAUTION CARD, OMNI, MRI, DUTCH
58	L2090NL	1	LABEL, CAUTION, 5000G LINE, 3150, DUTCH
59	L2091	1	LABEL, MRI GATING, 3150
60	L2092NL	1	LABEL, ETC02 WASTEGAS EXHAUST, 3150, DUTCH
61	L2093NL	1	LABEL, I/O CHARGER PORT, 3150, DUTCH
62	L2094NL	1	LABEL, RF ANTENNA, 3150, DUTCH
63			
64	L2096NL	1	OVERLAY, GRAPHICS, 3150/M, DUTCH

3151M-7 LANGUAGE OPTION 7, PORTUGUESE			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
6	L2056P	1	LABEL, REMOTE ALARMS, 3150, PORTUGUESE
31	9538P	1	MANUAL, OPERATORS, 3150, PORTUGUESE
46	L2010P	1	LABEL, PRECAUTION CARD, OMNI, MRI, PORTUGUESE
58	L2090P	1	LABEL, CAUTION, 5000G LINE, 3150, PORTUGUESE
59	L2091	1	LABEL, MRI GATING, 3150
60	L2092P	1	LABEL, ETCO2 WASTEGAS EXHAUST, 3150, PRT.
61	L2093P	1	LABEL, I/O CHARGER PORT, 3150, PORTUGUESE
62	L2094P	1	LABEL, RF ANTENNA, 3150, PORTUGUESE
63			
64	L2096P	1	OVERLAY, GRAPHICS, 3150/M, PORTUGUESE

3151M-8 LANGUAGE OPTION 8, DANISH			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
6	L2056D	1	LABEL, REMOTE ALARMS, 3150, DANISH
31	9538D	1	MANUAL, OPERATORS, 3150, DANISH
46	L2010D	1	LABEL, PRECAUTION CARD, OMNI, MRI, DANISH
58	L2090D	1	LABEL, CAUTION, 5000G LINE, 3150, DANISH
59	L2091	1	LABEL, MRI GATING, 3150
60	L2092D	1	LABEL, ETC02 WASTEGAS EXHAUST, 3150, DANISH
61	L2093D	1	LABEL, I/O CHARGER PORT, 3150, DANISH
62	L2094D	1	LABEL, RF ANTENNA, 3150, DANISH
63			
64	L2096D	1	OVERLAY, GRAPHICS, 3150/M, DANISH

3151M-9 LANGUAGE OPTION 9, NORWEGIAN			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
6	L2056N	1	LABEL, REMOTE ALARMS, 3150, NORWEGIAN
31	9538N	1	MANUAL, OPERATORS, 3150, NORWEGIAN
46	L2010N	1	LABEL, PRECAUTION CARD, OMNI, MRI, NORWEGIAN
58	L2090N	1	LABEL, CAUTION, 5000G LINE, 3150, NORWEGIAN
59	L2091	1	LABEL, MRI GATING, 3150
60	L2092N	1	LABEL, ETC02 WASTEGAS EXHAUST, 3150, NOR.
61	L2093N	1	LABEL, I/O CHARGER PORT, 3150, NORWEGIAN
62	L2094N	1	LABEL, RF ANTENNA, 3150, NORWEGIAN
63			
64	L2096N	1	OVERLAY, GRAPHICS, 3150/M, NORWEGIAN

3151M-10 LANGUAGE OPTION 10, SWEDISH			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
6	L2056SW	1	LABEL, REMOTE ALARMS, 3150, SWEDISH
31	9538SW	1	MANUAL, OPERATORS, 3150, SWEDISH
46	L2101SW	1	LABEL, PRECAUTION CARD, OMNI, MRI, SWEDISH
58	L2090SW	1	LABEL, CAUTION, 5000G LINE, 3150, SWEDISH
59	L2091	1	LABEL, MRI GATING, 3150
60	L2092SW	1	LABEL, ETC02 WASTEGAS EXHAUST, 3150, SWEDISH
61	L2093SW	1	LABEL, I/O CHARGER PORT, 3150, SWEDISH
62	L2094SW	1	LABEL, RF ANTENNA, 3150, SWEDISH
63			
64	L2096SW	1	OVERLAY, GRAPHICS, 3150/M, SWEDISH

				D	PER ECN #8142	SR	12DEC0
				C	PER ECN #8120	SR	16NOV00
H	PER ECN #8394	SR	31AUG01	B	PER ECN #7941	CHY	28AUG00
G	PER ECN #8137	JRH	14MAY01	A	RELEASED, ECN #7831	CHY	14JUL00
F	PER ECN #8182	CHY	1FEB01	REV.	DESCRIPTION	BY	DATE
E	PER ECN #7660	CHY	23JAN01	THIS DOCUMENT IS CONFIDENTIAL AND PROPRIETARY AND IS THE SOLE PROPERTY OF NANO RESEARCH INCORPORATED (NRI). IT IS NOT TO BE DISCLOSED TO ANY PARTY, REPRODUCED OR USED IN ANY OTHER MANNER WITHOUT WRITTEN CONSENT OF S&D COMPANY. IN ANY RESEARCH NRI MAINTAINS THE RIGHT TO CHANGE SPECIFICATIONS AT ANY TIME.			
REV.	DESCRIPTION	BY	DATE				

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE	DRAWN	CHY	14JUL00	 Invivo Research Inc. PRECISION BIOMEDICAL INSTRUMENTS Subsidiary of Invivo Corporation 12601 RESEARCH PARKWAY., ORLANDO, FL 32826
.XX = ±	DESIGNED	GRB	14JUL00	
.XXX = ±	CHECKED			
ANGLES = ±	APPROVED			

	
THIRD ANGLE PROJECTION	
DO NOT SCALE THIS DRAWING!!	

TITLE: ASSEMBLY: 3150M MONITOR, PATIENT, MRI, MAGNITUDE	CAD SCALE: 1 : 1	SHEET: 1 of 5	DWG. NO.: 197C619	REV: H
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3152M-1 VOLTAGE OPTION 1, 110V			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
100	AS153	1	POWER ADAPTER, 3150
101	AS18	1	ASSY, LINE CORD, 110V, TESTED
102	FU13	2	FUSE, 3/4 AMP, SLO-BLO, 313.750
103	AC348	1	CABLE, POWER ADAPTER, 3150, 25 FT.
105	HH08	2	HOOK, PLASTIC, RECT., WHITE, SUPER

3152M-2 VOLTAGE OPTION 2, 220V EURO/GERMAN			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
100	AS153	1	POWER ADAPTER, 3150
101	AS18G	1	ASSY, LINE CORD, 10A/220-230V, EURO.
102	FU25	2	FUSE, 4/10 AMP, 250V, SLO-BLO, 3AG
103	AC348	1	CABLE, POWER ADAPTER, 3150, 25 FT.
105	HH08	2	HOOK, PLASTIC, RECT., WHITE, SUPER

3152M-3 VOLTAGE OPTION 3, 220V UNIVERSAL			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
100	AS153	1	POWER ADAPTER, 3150
101	AS18A	1	ASSY, LINE CORD, 220V, TESTED
102	FU25	2	FUSE, 4/10 AMP, 250V, SLO-BLO, 3AG
103	AC348	1	CABLE, POWER ADAPTER, 3150, 25 FT.
105	HH08	2	HOOK, PLASTIC, RECT., WHITE, SUPER

3152M-4 VOLTAGE OPTION 4, 100V			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
100	AS153J	1	POWER ADAPTER, 3150
101	AS18A	1	ASSY., LINE CORD, 220V, TESTED
102	FU13	2	FUSE, 3/4 AMP, SLO-BLO, 313.750
103	AC348	1	CABLE, POWER ADAPTER, 3150, 25 FT.
105	HH08	2	HOOK, PLASTIC, RECT., WHITE, SUPER

3154M-1 INVASIVE PRESSURES OPTION 1, DUAL (2)			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
56	H013	-2	CONDUCTIVE CAP CEC-10, BLACK
106	9390K	1	HOOK, PLASTIC, RECT., WHITE, SUPER
124	AB89	1	PCA, INVASIVE PRESS., ISO, 3150
125	AB90	1	PCA, INVASIVE PRESS., NON-ISO, 3150
126	HI51	1	INSULATOR, INVASIVE PRESS. PCA, 3150
127	HS51	2	STANDOFF, .25 HEX, M/F, #6-32 X .38, BR.
128	NS02N	3	SCR., #6-32 X 1/4 LG., PHMS-XR, NM

SEE NOTE 6, SHT 3

3155M-1 ETCO2 OPTION 1, ETCO2 (mmHg)			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
110	AS156	1	ASSY, ETCO2 PNEUMATICS CONTROLLER, 3150
111	HP86A	1	LUER LOCK, MALE, MALE THD, 1/4-28
112	HP87A	1	LUER LOCK, FEMALE, FEMALE THD, 1/4-28
113	ED06	1	TUBE, NAFION, ME DRYER, 12"
114	HP102	1	ADAPTER, LUER LOCK, F/F
115	9010D	3	ETCO2 SAMPLING KIT, 20 FT.
116	9012	3	CANNULA, DISP., ADULT (4000F)
117	9013	2	CANNULA, DISP., PED. (4100F)
118	9014	2	CANNULA, DISP., INFANT (4200F)
119	9015	2	CANNULA, DISP., INT. INF. (4300F)
N/A	AP45	(-1)	PNEU. ASSY, 3150
N/A	AP45A	1	PNEU. ASSY, ETCO2, 3150
120	AC358	1	CAB, DSP/CO2 INTERCONNECT
121	AC359	1	CAB, PNEUMATIC ASSY-CO2 BD
122	AM60	1	PROM SET, ETCO2 PNEUMATICS CONTROLLER
123	NS76N	2	SCR, #4-40 X 3/16 LG. PHMS-XR, SS, NM
129	M198	A/R	ADHESIVE, LOCTITE 569, BROWN, PIPE SEALANT
137	9471	1	KIT, WASTE GAS SCAVENGER HOSE

3155M-2 ETCO2 OPTION 2, ETCO2 (kPa)			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
110	AS156	1	ASSY, ETCO2 PNEUMATICS CONTROLLER, 3150
			SAME PARTS LIST AS 3155M-1
129	M198	A/R	ADHESIVE, LOCTITE 569, BROWN, PIPE SEALANT
137	9471	1	KIT, WASTE GAS SCAVENGER HOSE

3157M-1 ANESTHETIC AGENTS OPTION 1, ANESTHETIC AGENTS			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
X	X	X	X

3150M-19-01 COMM. OPTION 01, TELEM, SIEMENS			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
130	LL131	1	INSTR., INSTAL., 3150 MRI SIEMENS TELEMETRY OPT.
131	L199	1	LABEL, TELECOMMUNICATIONS LINK
132	M098	1	BOX, MLTI-DPTH, 11.25 x 8.75 x 6.00
133	9269	1	CABLE, TRANSCIEVER/ELECTRONICS, SIEMENS
134	9270	1	CABLE, GATING, 3150/PMU, SIEMENS
135	9720	1	ASSY., TRANSCIEVER MODULE, SIEMENS
37	AM67	1	PROM SET, MASTER uP, 3150/M
37	AM70	-1	PROM SET, MASTER uP, 3150/M

3150M-19-02 COMM. OPTION 02, HDWIRE, ENG.			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
104	H058	1	PLUG, HOLE, .25 DIA, BLACK, NYLON
107	AC331	-1	CAB, ANTENNA, TELE, 8 INCH
108	HE61	-1	ANTENNA, 2.4 GHZ, RT. ANGLE
109	HE60	-1	TRANSCIEVER, 2.4 GHZ
136	9474	1	KIT, HARDWIRE OPTION, 3155MVS/3150
3	AB119A	-1	PCA, MASTER PROC, 18 MHZ, 3150/M
3	AB119	1	PCA, MASTER PROC, 12 MHZ, 3150/M
37	AM70	-1	PROM SET, MASTER uP, 3150/M
37	AM59	1	PROM SET, MASTER uP, 3150

3150M-19-03 COMM. OPTION 03, HDWIRE, GER.			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
104	H058	1	PLUG, HOLE, .25 DIA, BLACK, NYLON
			SAME PARTS LIST AS 3150-19-02
37	AM59G	1	PROM SET, MASTER uP, 3150, GERMAN

3150M-19-04 COMM. OPTION 04, HDWIRE, FRN.			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
104	H058	1	PLUG, HOLE, .25 DIA, BLACK, NYLON
			SAME PARTS LIST AS 3150-19-02
37	AM59F	1	PROM SET, MASTER uP, 3150, FRENCH

3150M-19-05 COMM. OPTION 05, HDWIRE, SPN.			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
104	H058	1	PLUG, HOLE, .25 DIA, BLACK, NYLON
			SAME PARTS LIST AS 3150-19-02
37	AM59S	1	PROM SET, MASTER uP, 3150, SPANISH

REF.
P/N AS145M

REF.
P/N AS145M

3150M-19-06 COMM. OPTION 06, HDWIRE, ITL.			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
104	H058	1	PLUG, HOLE, .25 DIA, BLACK, NYLON
			SAME PARTS LIST AS 3150-19-02
37	AM59I	1	PROM SET, MASTER uP, 3150, ITALIAN

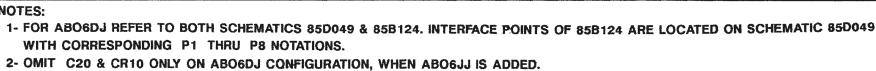
3150M-19-07 COMM. OPTION 07, HDWIRE, PRT.			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
104	H058	1	PLUG, HOLE, .25 DIA, BLACK, NYLON
			SAME PARTS LIST AS 3150-19-02
37	AM59P	1	PROM SET, MASTER uP, 3150, PORTUGUESE

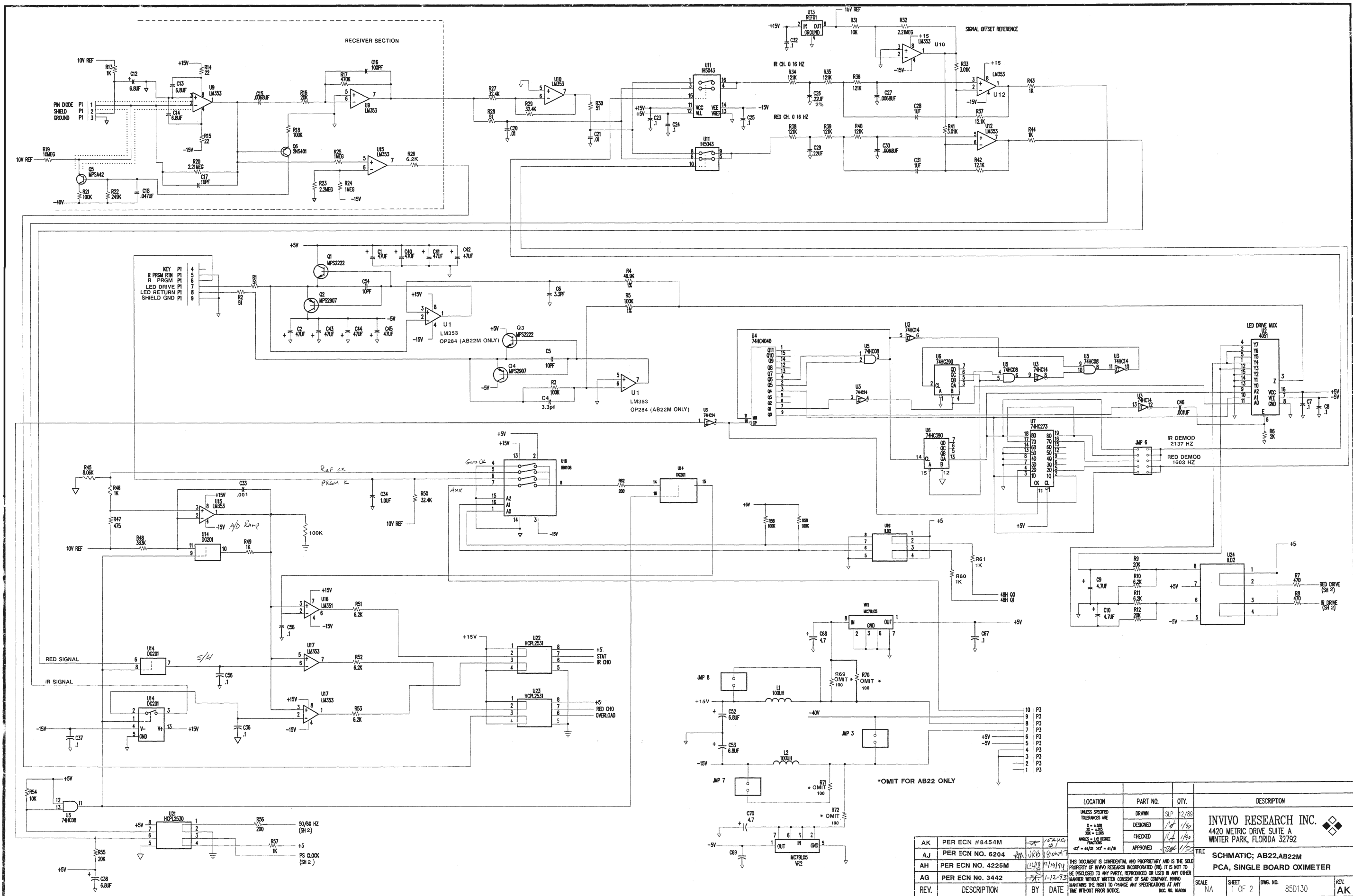
3150M-19-08 COMM. OPTION 08, HDWIRE, NLS.			
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
104	H058	1	PLUG, HOLE, .25 DIA, BLACK, NYLON
			SAME PARTS LIST AS 3150-19-02
37	AM59NL	1	PROM SET, MASTER uP, 3150, NLS

137	SEE CHART	---	KIT, WASTE GAS SCAVENGER HOSE
136	SEE CHART	---	KIT, HARDWIRE OPTION, 3155MVS/3150
135	SEE CHART	---	ASSY., TRANSCIEVER MODULE, SIEMENS
134	SEE CHART	---	CABLE, GATING, 3150/PMU, SIEMENS
133	SEE CHART	---	CABLE, TRANSCIEVER/ELECTRONICS, SIEMENS
132	SEE CHART	---	BOX, MLTI-OPTH, 11.25 x 8.75 x 6.00
131	SEE CHART	---	LABEL, TELECOMMUNICATIONS LINK
130	SEE CHART	---	INSTR., INSTL., 3150 MRI SIEMENS TELEMETRY OPT.
129	SEE CHART	---	ADHESIVE, LOCTITE 569, BROWN, PIPE SEALANT
128	SEE CHART	---	SCR., #6-32 X 1/4 LG. PHMS-XR, NM
127	SEE CHART	---	STANDOFF, .25 HEX, M/F, #6-32 X .38, BR.
126	SEE CHART	---	INSULATOR, INVASIVE PRESS. PCA, 3150
125	SEE CHART	---	PCA, INVASIVE PRESS. NON-ISO, 3150
124	SEE CHART	---	PCA, INVASIVE PRESS. ISO, 3150
123	SEE CHART	---	SCR, #4-40 X 3/16 LG. PHMS-XR, SS, NM
122	SEE CHART	---	PROM SET, ETCO2 PNEUMATICS CONTROLLER
121	SEE CHART	---	CAB, PNEUMATIC ASSY-CO2 BD
120	SEE CHART	---	CAB, DSP/CO2 INTERCONNECT
119	SEE CHART	---	CANNULA, DISP., INT. INF. (4300F)
118	SEE CHART	---	CANNULA, DISP., INFANT (4200F)
117	SEE CHART	---	CANNULA, DISP., PED. (4100F)
116	SEE CHART	---	CANNULA, DISP., ADULT (4000F)
115	SEE CHART	---	ETCO2 SAMPLING KIT, 20 FT.
114	SEE CHART	---	ADAPTER, LUER LOCK, F/F
113	SEE CHART	---	TUBE, NAFION, ME DRYER, 12"
112	SEE CHART	---	LUER LOCK, FEMALE, FEMALE THD, 1/4-28
111	SEE CHART	---	LUER LOCK, MALE, MALE THD, 1/4-28
110	SEE CHART	---	ASSY, ETCO2 PNEUMATICS CONTROLLER, 3150
109	SEE CHART	---	TRANSCIEVER, 2.4 GHZ
108	SEE CHART	---	ANTENNA, 2.4 GHZ, RT. ANGLE
107	SEE CHART	---	CAB., ANTENNA, TELE., 8 INCH
106	SEE CHART	---	CABLE ASSY, PRESSURE TRANSDUCER
105	SEE CHART	---	HOOK, PLASTIC, RECT., WHITE, SUPER
104	SEE CHART	---	PLUG, HOLE, .25 DIA, BLACK, NYLON
103	SEE CHART	---	CABLE, POWER ADAPTER, 3150, 25 FT.
102	SEE CHART	---	FUSE
101	SEE CHART	---	ASSY, LINE CORD
100	SEE CHART	---	POWER ADAPTER, 3150

ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:	DRAWN	CHY	14JUL00
.XX = ±	DESIGNED	GRB	14JUL00
.XXX = ±	CHECKED		
ANGLES = ±	APPROVED		
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DO NOT SCALE THIS DRAWING !!!			
THIRD ANGLE PROJECTION			
Invivo Research Inc. PRECISION BIOMEDICAL INSTRUMENTS Subsidiary of Invivo Corporation 12601 RESEARCH PARKWAY., ORLANDO, FL 32826			
TITLE: ASSEMBLY: 3150M MONITOR, PATIENT, MRI, MAGNITUDE			
CAD SCALE:	SHEET:	DWG. NO.:	REV.:
1 : 1	2 of 5	197C619	H

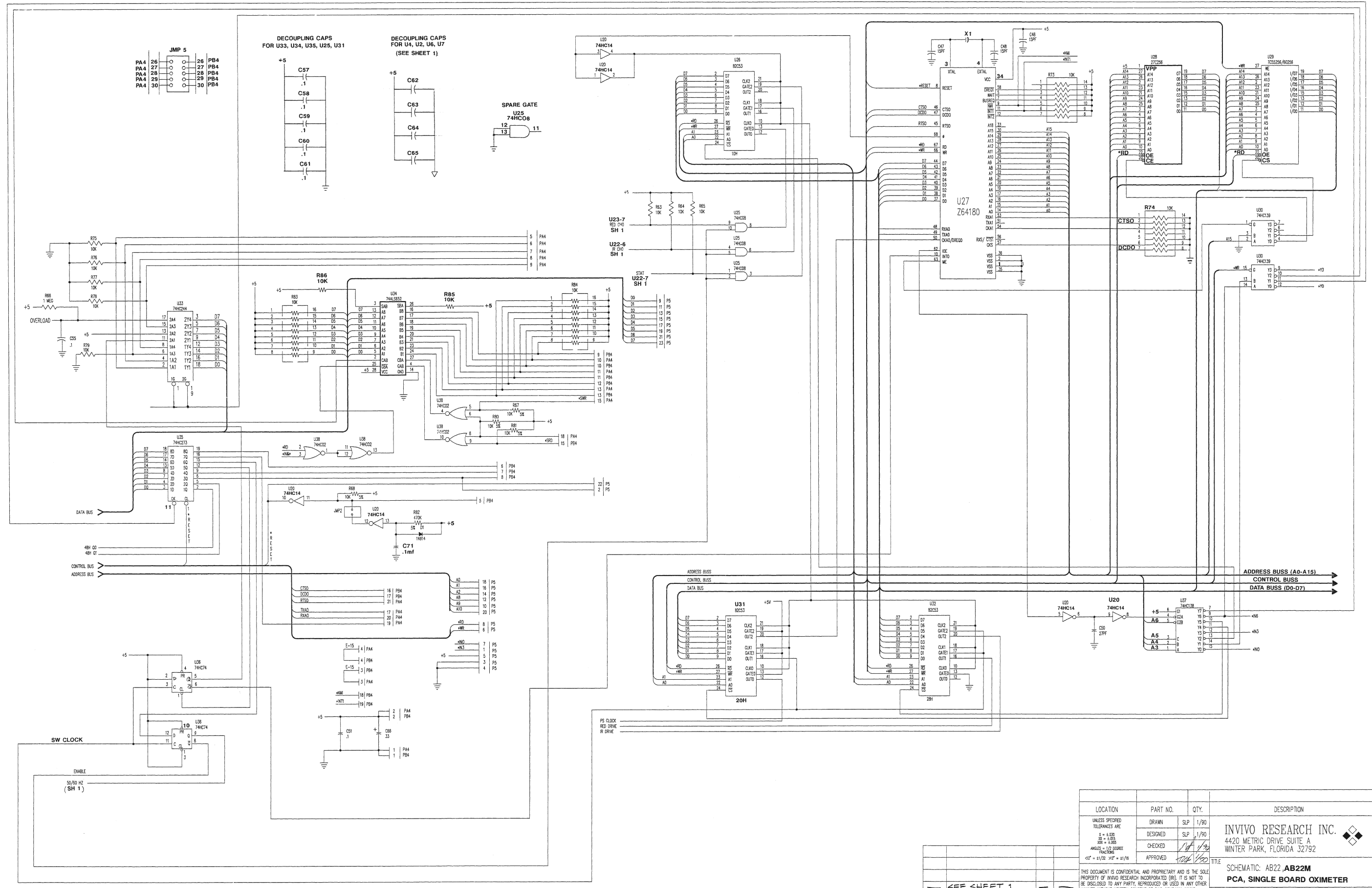
LF21 REV. A

22 X 34 PRINTED ON NO. 1000H CLEARPRINT



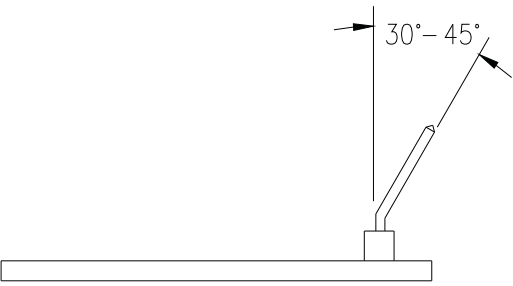
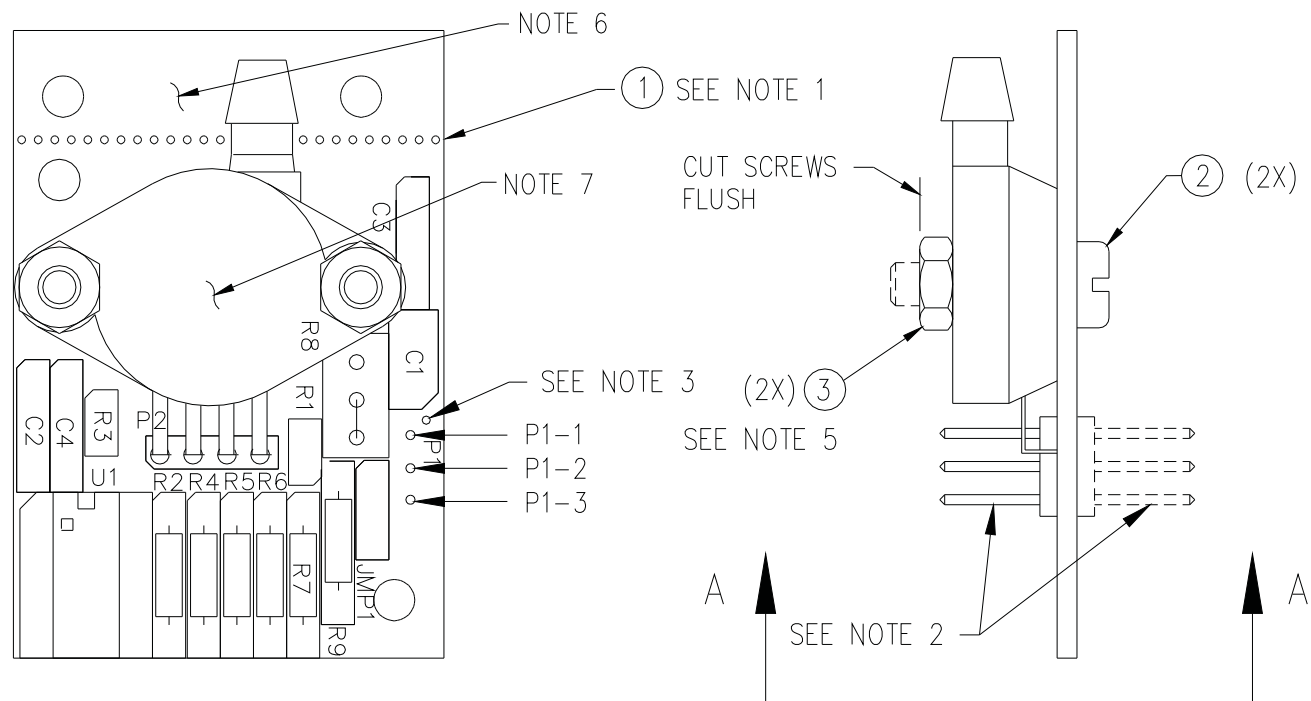
LOCATION	PART NO.	QTY.	DESCRIPTION
AK	PER ECN #8454M	1	PER ECN #8454M
AJ	PER ECN NO. 6204	1	PER ECN NO. 6204
AH	PER ECN NO. 4225M	1	PER ECN NO. 4225M
AG	PER ECN NO. 3442	1	PER ECN NO. 3442
REV.	DESCRIPTION	BY	DATE

UNLESS SPECIFIED TOLERANCES ARE: R = 0.5% C = 5.0% WAVEFORMS = 10 PERCENT PULSES	DRAWN 1/12/88	CHECKED 1/12/88	APPROVED 1/12/88
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TITLE SCHMATIC; AB22,AB22M PCA, SINGLE BOARD OXIMETER			
SCALE NA	SHEET 1 OF 2	DWG. NO. 85D130	REV. AK



LOCATION	PART NO.	QTY.	DESCRIPTION
UNLESS SPECIFIED TOLERANCES ARE	DRAWN	SLP 1/90	INVIVO RESEARCH INC.
$\pm .030$	DESIGNED	SLP 1/90	4420 METRIC DRIVE SUITE A
$\pm .015$	CHECKED	SLP 1/90	WINTER PARK, FLORIDA 32792
ANGLES = 1/2 DEGREE	APPROVED	SLP 1/90	TITLE
FRACTIONS			SCHEMATIC: AB22, AB22M
$\phi 2" = 51/32, 2 1/2" = 51/16$			PCA, SINGLE BOARD OXIMETER
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REV	DESCRIPTION	BY	DATE
1	SEE SHEET 1		

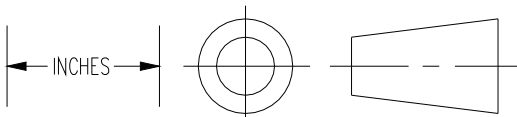


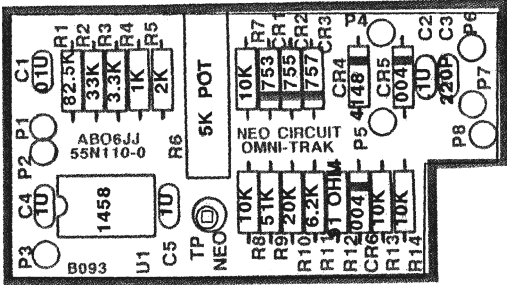
VIEW A-A

ROTATED 90°
AS80B ONLY

NOTES

1. BREAK OFF FRONT PART OF BOARD AT PERFORATIONS BEFORE ASSEMBLY OF AS80A AND AS80B ONLY.
2. MOUNT P1 ON COMPONENT SIDE AS SHOWN FOR AS80 AND AS80B. MOUNT P1 ON SOLDER SIDE FOR AS80A. FOR AS80B, BEND PINS 30°-45° AS SHOWN IN VIEW A-A.
3. APPLY A YELLOW "DOT" LOCATED APPROXIMATELY AS SHOWN USING SUITABLE PERMANENT MARKER TO INDICATE +5VDC.
4. AFTER ALL OTHER COMPONENTS HAVE BEEN INSTALLED AND BOARD HAS BEEN CLEANED, SECURELY MOUNT TRANSDUCER, APPLYING A DROP OF "ASSURE" LOCTITE (M050) TO SCREW THREADS BEFORE APPLYING NUT. CUT ENDS OF SCREWS FLUSH WITH NUT.
5. SOLDER TRANSDUCER LEADS. THEN CLEAN SOLDER CONNECTIONS WITH A BRUSH AND SOLVENT. DO NOT GET SOLVENT INTO OR ON TRANSDUCER BODY.
6. FOR AS80, PRINT LOT NUMBER, ASSEMBLY NUMBER, REVISION AND ASSEMBLER'S INITIALS HERE.
7. FOR AS80A AND AS80B, PRINT LOT NUMBER, ASSEMBLY NUMBER AND REVISION HERE. PRINT ASSEMBLER'S INITIALS ON BOTTOM OF BOARD.

U1	IL53	1	OP AMP, 8 PIN DIP, PLASTIC (OPA2277)	
R9	R054	1	RES, 330 OHM 5% .25W CF	
R5, R6	RF24	2	RES, 383K 1% .125W MF	
R4	RF207	1	RES, 806K 1% .125W MF	
R2, R7	RF208	2	RES, 2.05K 1% .125W MF	
P2	X008B	1	TRANSDUCER, PRESSURE (MPX2050GP)	
P1	PA08	1	HEADER, UNSH, SR, 3 PIN (.10)	
C4	CC04	1	CAP, .01uF 10% 50V X7R CER AXIAL	
C2, C3	CC12	2	CAP, .1uF 20% 50V Z5U CER	
C1	CT01	1	CAP, 6.8uF 20% 16V TANT	
3	N009	2	NUT, #4-40 HEX NYLON	
2	NS83	2	SCREW, #4-40 X 5/8 LG. PHMS-NY	
1	B082B	1	PCB, TRANSDUCER MTNG 155N147 REV. A	
ITEM / REF. DES.		PART NO.	QTY.	DESCRIPTION
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE .XX = ± .030 .XXX = ± .015 ANGLES = ± 1/2°		DRAWN	SR	10/91
		DESIGNED	SLP	6/91
		CHECKED		
		APPROVED		
 THIRD ANGLE PROJECTION DO NOT SCALE THIS DRAWING !!!		TITLE: AS80/AS80A/AS80B TRANSDUCER MOUNTING BOARD ASSY., UNIVERSAL/CORO/3150 MRI		
		CAD SCALE: 2 : 1	SHEET: 1 OF 1	DWG. NO.: 94B380



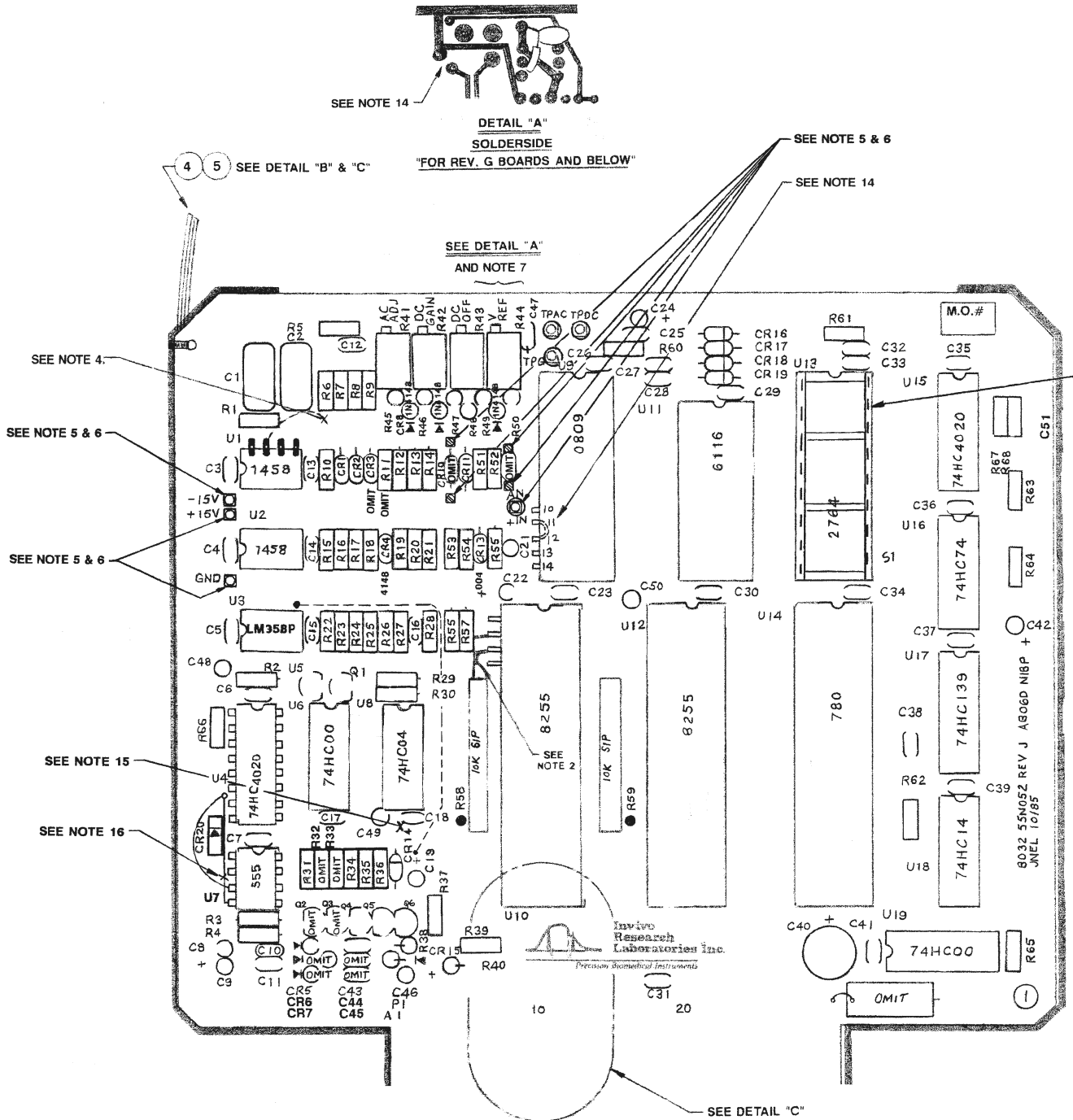
TP NEO	PA00	1	HEADER,UNSH, SR, 1 PIN (.10)
CR5, 6	D008	2	DIODE, SCHOTTKY, 1 AMP, 40V
R6	RP16	1	RES, 5K POT 80PR5K
R5	R017	1	RES, 2K .25W 5% CF
R4	R001	1	RES, 1K .25W 5% CF
R2	R011	1	RES, 33K .25W 5% CF
R3	R018	1	RES, 3.3K .25W 5% CF
R11	R028	1	RES, 0.2K .25W 5% CF
R10	R022	1	RES, 20K .25W 5% CF
R9	R023	1	RES, 51K .25W 5% CF
R7 8 13 14	R002	4	RES, 10K .25W 5% CF
R12	R007	1	RES, 91 OHM .25W 5% CF
R1	RF135	1	RES, 82.5K, ±1%, .125W, MF.
CR4	D000	1	SIGNAL 1N4148
CR3	DZ06	1	ZENER 1N757B 9.1V 500 MW
CR2	DZ05	1	ZENER 1N755B 7.5V 500 MW
CR1	DZ04	1	ZENER 1N753B 6.2V 500 MW
C3	CC02	1	220PF 20% 50V Z5U CERAMIC
C2 4 5	CC12	3	1UF 20% 50V Z5U CERAMIC .25" AX
C1	CC04	1	01UF 10% 50V X7R CERAMIC
U1	IL18	1	MC1458CP DUAL OP AMP
1	B093	1	NEO CIRCUIT BD, OMNI 55N110-0
LOCATION	PART NO.	QTY.	DESCRIPTION
UNLESS SPECIFIED TOLERANCES ARE X = ±.001 XX = ±.005 XXX = ±.005 ANGLES = 1/2 DEGREE FRACTIONS ±.1" = 1/32" .12" = 1/16"	DRAWN	<i>P</i> 3/86	INVIVO RESEARCH INC.  3061 WEST ALBANY BROKEN ARROW, OKLAHOMA 74012
	DESIGNED	<i>RES</i> 3/88	
	CHECKED	<i>P</i> 3/86	
	APPROVED	<i>ALL</i> 3/88	
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DOC. NO. 10A002			TITLE
			#AB06JJ NEO CIRCUIT ADAPTER ASSY, OMNI-TRAK
SCALE 2 : 1	SHEET 1 : 1	DWG. NO. 94C390	REV. C

C	PER ECN NO.3281	CHY	7/24/92
B	PER ECN NO. 3210	JP	5/92
A	PER ECN #1745M	JP	2-22-89
REV.	DESCRIPTION	BY	DATE

R28 56	RF37	2	RES. 511 OHM 1%, .125W, MF
CR11 13	D008	2	DIODE SCHOTTKY, 1 AMP, 40V

R1 23	RO1B	2	RES, 3.3K .25W 5% CF
R4	RO20	1	RES, 22K .25W 5% CF
R12	RO21	1	RES, 12K .25W 5% CF
R19,22	RO22	2	RES, 20K .25W 5% CF
R13 63	RO23	2	RES, 51K .25W 5% CF
R20,54	RO24	2	RES, 18K .25W 5% CF
R15,16	RO25	2	RES, 220K .25W 5% CF
R2	RO28	1	RES, 6.2K .25W 5% CF
R38	R128	1	RES, 1 MEG .25W 5% CF
S1	PO01	1	28 PIN ICN28054T
TP's	PA00	11	STIX, 1 PIN 1/2"
U3	IL22	1	LM358P DUAL OP. AMPLIFIER
2	AB06JJ	1	PCA, NEO. CKT. ADAPTER, OMNI-TRAK
3	WT07	3/16"	HEAT SHRINK, 3/64" I.D., BLACK
4	AC38	1	CABLE, TRANSDUCER / NIBP
5	HC04	1	TIE, CABLE

36,67 29,34 R7	RO17	5	RES, 2K .25W 5% CF	
R9	RO11	1	RES, 33K .25W 5% CF	
R18,51	RO07	2	RES, 91K .25W 5% CF	
R4	RO05	1	RES, 1.5 MEG .25W 5% CF	
R3	RO04	1	RES, 470K .25W 5% CF	
R5	RO03	1	RES, 5.1K .25W 5% CF	
64,65,68 60,62 55,57 52,53 37,39 30,35 25,26 17,24 R6,10	RO02	20	RES, 10K .25W 5% CF	
R8 27,40	RO01	3	RES, 1K .25W 5% CF	
R31 66	RO00	2	RES, 100K .25W 5% CF	
R58 59	RS06	2	RES, 10K 51P 10 PSTN CF	
R40	RP15	1	RES, 10K POT 68XREK	
R41-43	RP24	3	RES, 5K POT 68XREK	
R47	RF67	1	RES, 4.87K .125W 1% MF	
R46	RF66	1	RES, 28K .125W 1% MF	
R50	RF63	1	RES, 2.74K .125W 1% MF	
R45	RF52	1	RES, 20K .125W 1% MF	
R21	RF08	1	RES, 165K .125W 1% MF	
R48 R49	RF07	2	RES, 10K .125W 1% MF	
G6	Q003	1	VN10KM	
Q1	Q001	1	MPS2907A PNP	
Q4,5	Q000	2	MPS2222A NPN	
U5	IR14	1	LM3362-5.0 VOLTAGE REGULATOR	
U10 12	IN26	2	IN5825FN 110	
U4	IN23	1	UPD780C PROCESSOR	
U13	AM 9E	1	PROM SET, NIBP ADULT/NEO	
U11	IM63	1	HM6116LFP-3 8 BIT STATIC RAM	
U12	IL18	2	MC1453CP DUAL OP AMP	
U7	IL12	1	NE555 TIMER (MC1455)	
U4 15	IC48	2	74HC4020 14 BIT BINARY COUNTER	
U17	IC43	1	74HC139 2 TO 4 LINE DECODER	
U6 14	IC34	2	SN74HC00N QUAD DUAL POS NAND GATE	
U8	IC33	1	SN74HC04N HEX INVERTER	
U18	IC30	1	SN74HC14N HEX SCHMITT INVERTER	
U9	IC09	1	ADCO8090CN A TO D CONVERTER	
U16	IC05	1	74HC14 DUAL "D" RLP FLOP	
CR4,12 18,26 CR5	D000	12	SIGNAL IN4148	
CR2	D207	1	TRANSORBE 3A22	
CR2	D206	1	ZENER IN757B	
CR1	D205	1	ZENER IN755B	
CR1 46	CT09	2	1uF 20% 35V TANTALUM	
CR1 22,47	CT01	3	6.8uF 20% 16V TANTALUM	
CR4 28,42	CT13	4	10uF 20% 35V TANTALUM	
CR0	CA06	1	100uF 20% 35V EPO, ALUMINUM	
CR12	CP08	2	.1uF 5% 100V POLYESTER	
48-50 43 39,41 33-37 26-31 23,25 17,18 13-15 C3-7	CC12	29	.1uF 20% 50V 25V CERAMIC .25"	
CR11,10 C51	CC05	3	.001uF 10% 50V X7R CERAMIC	
CR10 12	CC04	2	.01uF 10% 50V X7R CERAMIC .25	
C32	CC02	1	220pF 20% 50V 25V CERAMIC	
C38	CC00	1	27pF 20% 50V 25V CERAMIC	
LOC.	PART NO.	NO. REQ'D.	DESCRIPTION	MAT'L. REQ'NT.
1	B032	1	NIBP PCB, OMNI-TRAK 55N052- J	
TOLERANCES Unless otherwise specified: X ± .030 XX ± .015 XXX ± .005 FRACTIONS 12 IN OR LESS ± 1/32 GREATER THAN 12 IN ± 1/16 ANGLES 1/2 DEG FINISHES 125			In vivo Research Laboratories Inc.  Drawn to the standard of measurements ASSEMBLY: #AB06DJ NIBP, ADULT / NEO, OMNI-TRAK SCALE SHEET DWG. NO. / OF 1 94D462 REV	
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			U	

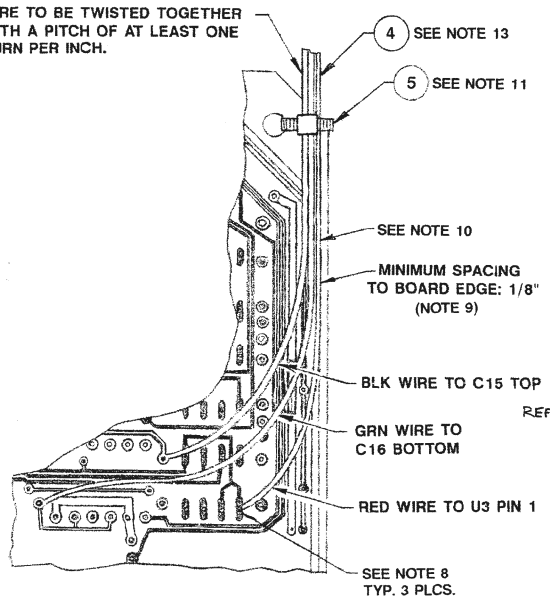


NOTES:

- CUT LEADS ON LEAD CUTTING MACHINE.
- CUT TRACE GOING TO U10 PIN 4 AT PIN 4 ON ALL REV. C PCB's.
- STUFF RESISTORS BODY-TO-BODY WHERE POSSIBLE TO PREVENT POSSIBLE SHORTING.
- ON ALL REVS. OF PCB BELOW REV. F, ON COMPONENT SIDE, USING INSULATED BUSS WIRE, JUMPER FROM U7-1 TO BOTTOM LEG OF R6.
- AT ALL LOCATIONS INDICATED, (EACH END OF CR10, C20, AN+IN, -15V, +15V, +15V & GND) INSTALL PA00, STIX SINGLE PIN CONNECTOR.
- INSTALL PCA, AB06JJ, OVER THE PA00, STIX CONNECTORS, AND POSITION DOWN AS CLOSE TO THE AB06DJ BOARD AS POSSIBLE WHILE MAINTAINING CLEARANCE ABOVE COMPONENTS BENEATH. SOLDER ON PLACE FROM COMPONENT SIDE OF AB06JJ BOARD.
- INSTALL PART NO. CT01 (6.8uF) AS "C47" BETWEEN THRU HOLE JUST ABOVE R44 AND PIN 1 OF R44 USING 3/16" PIECE OF HEAT SHRINK (WT07) AS SHOWN IN DETAIL "A".
- BEND "J-HOOKS" IN THE ENDS OF THE WIRES BEFORE SOLDERING TO THE PLACES AS SHOWN.
- KEEP WIRES AT LEAST 1/8" AWAY FROM THE EDGE OF THE BOARD.
- SECURE THE WIRES TO THE BOARD WITH TAK PAK OR EQUIVALENT.
- USE WIRE TIE (HC04) PASSED THRU HOLE IN CORNER OF BOARD TO SECURE THE WIRES.
- MAKE TWO (2) CUTS AS SHOWN IN DETAIL "C".
- FOR CABLE CONSTRUCTION, SEE AC38 ASSEMBLY.
- ON REV. F BOARDS AND BELOW, CUT TRACE ON SOLDER SIDE BETWEEN PIN PADS OF R60 AND C26. PLACE JUMPER ON SOLDER SIDE ON U9 BETWEEN PINS 11 AND 12.
- ON SOLDERSIDE, CUT TRACE BETWEEN THRU-HOLE BY LOC. CR14 AND THRU-HOLE BETWEEN LOCATION R25 & R26. ADD JUMPER FROM U3, PIN 5 TO POSITIVE SIDE OF C19. FOR REV. H B032 ONLY.
- ON COMPONENT SIDE, CUT TRACE BETWEEN THRU HOLE BY LOC. U4, PINS 6 & 7 AND U7, PIN 3. ADD JUMPER FROM U7, PIN 3 TO THRU HOLE BY U4, PINS 6 & 7.
- AM09E EPROM (U13) TO BE INSTALLED AT NEXT ASSEMBLY LEVEL.

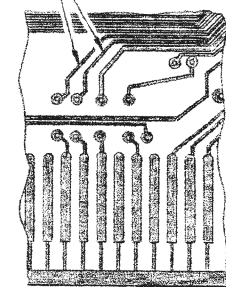
NOTE: WIRE TO BE TWISTED TOGETHER WITH A PITCH OF AT LEAST ONE TURN PER INCH.

NOTE 17



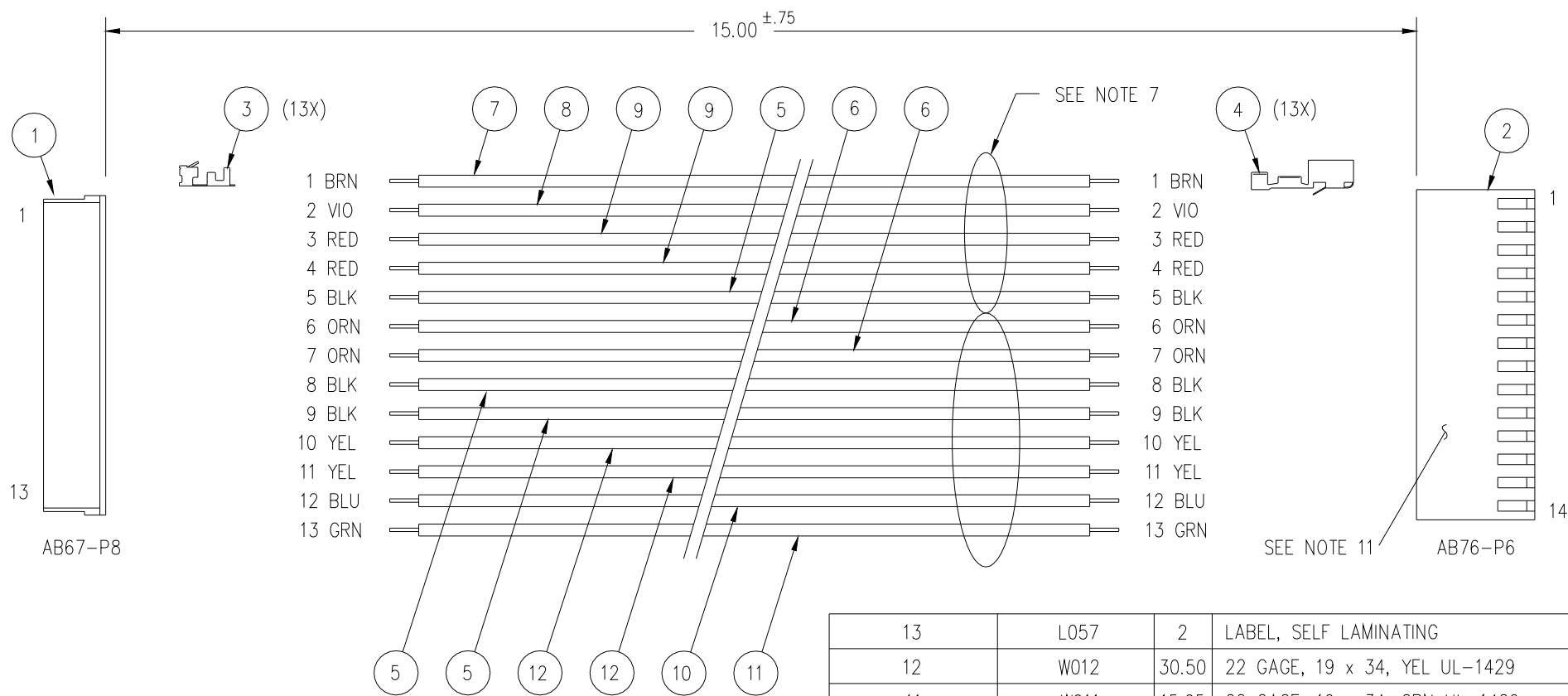
DETAIL "B"
SOLDER SIDE SHOWN
SCALE 2:1

CUT THESE TWO TRACES HERE



DETAIL "C"
SOLDER SIDE SHOWN
SCALE: 2:1

U	PER ECN #8468	CHY	PER ECN NO. 3248	CHY
T	PER ECN #8188	CHY	PER ECN NO. 3210	SR
R	PER ECN #6522	KCO	PER ECN NO. 3047M	CHY
P	PER ECN #6139	KCO	PER ECN NO. 2934	CHY
N	PER ECN NO. 3923	CHY	PER ECN NO. 2889	CHY
M	PER ECN NO. 3860	CHY	PER ECN NO. 2839M	CHY
L	PER ECN NO. 3359	CHY	PER ECN NO. 2707	CHY
K	PER ECN NO. 3319M	CHY	PER ECN NO. 2242M	SR
LTR	REVISION	DATE	PER ECN NO. 2143	CHY



NOTES:

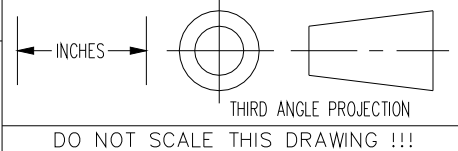
- CUT SINGLE WIRES (ITEMS 7, 8, 10 & 11), TWO WIRES (ITEMS 6, 9 & 12) AND THREE WIRES (ITEM 5) TO 15.25 LENGTH.
- STRIP ONE END .100 AND OTHER END .125.
- CRIMP P/N PT28, CONTACT (ITEM 3) ON .100 STRIPPED END.
- CRIMP P/N PT36, CONTACT (ITEM 4) ON OPPOSITE END OF EACH WIRE.
- ROUTE TO INSPECTION.
- INSERT CONTACTS INTO P/N PA233 HOUSING (ITEM 1) AS SHOWN, ENSURING CORRECT WIRE TO PIN MATING.
- TWIST WIRES 1-2 TURNS PER INCH.
- INSERT CONTACTS INTO P/N PA337A HOUSING (ITEM 2) AS SHOWN, ENSURING CORRECT WIRE TO PIN MATING.
- ROUTE TO INSPECTION.
- USING BLACK INDELIBLE INK, PRINT CABLE DESTINATION ON P/N L057 LABEL (ITEM 13) AND ATTACH TO EACH END OF CABLE. CABLE DESTINATION IS INDICATED AT EACH END.
- PRINT ASSEMBLY NUMBER, REVISION, LOT NUMBER, AND ASSEMBLER INITIALS ON HOUSING.
- ROUTE TO INSPECTION.

B	PER ECN #6477	JRB	7APR98
A	RELEASED, ECN #5603	SR	27OCT98
REV.	DESCRIPTION	BY	DATE

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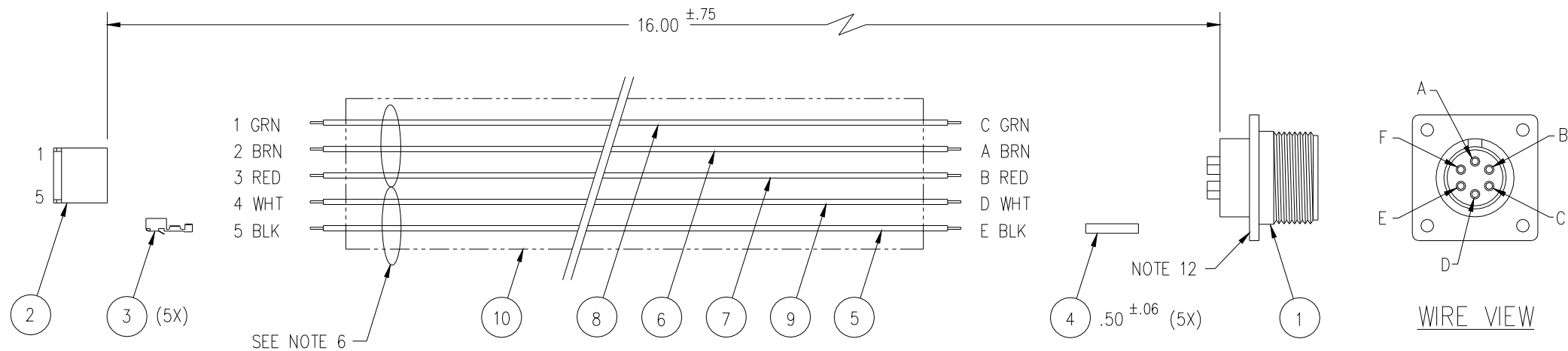
13	L057	2	LABEL, SELF LAMINATING
12	W012	30.50	22 GAGE, 19 x 34, YEL UL-1429
11	W011	15.25	22 GAGE, 19 x 34, GRN UL-1429
10	W010	15.25	22 GAGE, 19 x 34, BLU UL-1429
9	W009	30.50	22 GAGE, 19 x 34, RED UL-1429
8	W008	15.25	22 GAGE, 19 x 34, VIO UL-1429
7	W007	15.25	22 GAGE, 19 x 34, BRN UL-1429
6	W006	30.50	22 GAGE, 19 x 34, ORN UL-1429
5	W005	45.75	22 GAGE, 19 x 34, BLK UL-1429
4	PT36	13	CONTACT, CRIMP SOCKET, 22-26 AWG
3	PT28	13	CONTACT, CRIMP SOCKET, 22-28 AWG
2	PA337A	1	CONN, 14P, SR. HSG, .100 CTRS.
1	PA233	1	CONN, 13P, SR. HSG, ST, .098 CTRS.

ITEM / REF. DES.	PART NO.		QTY.	DESCRIPTION
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE .XX = ± .25 .XXX = ± .015 ANGLES = ± —	DRAWN	SR	17MAR97	 Invivo Research Inc. <i>PRECISION BIOMEDICAL INSTRUMENTS</i> <i>Subsidiary of Invivo Corporation</i> 12601 RESEARCH PARKWAY., ORLANDO, FL 32826
	DESIGNED	CN	12NOV96	
	CHECKED			
	APPROVED			



TITLE: ASSEMBLY: AC313
CABLE, DC POWER, 3150

CAD SCALE: 2 : 1	SHEET: 1 OF 1	DWG. NO.: C59B244	REV.: B
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NOTES:

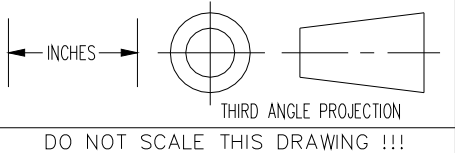
- CUT WIRES (ITEMS 5–9) TO 16.25 LENGTH.
- STRIP ALL WIRES .125 ON ONE END. STRIP AND TIN .250 ON THE OTHER END.
- CRIMP P/N PT36 CONTACT (ITEM 3) ON UNTINNED END OF EACH WIRE.
- ROUTE TO INSPECTION.
- INSERT CONTACTS INTO P/N PA338 HOUSING (ITEM 2) AS SHOWN, ENSURING CORRECT WIRE TO PIN MATING.
- TWIST WIRES 1–2 TURNS PER INCH.
- SLIDE P/N HI14 SLEEVING (ITEM 10) ONTO WIRES FROM THE TINNED END.
- SLIDE .50 PIECE OF P/N WT05 HEAT SHRINK (ITEM 4) ONTO EACH WIRE.
- SOLDER WIRES TO P/N PA107 (ITEM 1) AS SHOWN, ENSURING CORRECT WIRE TO PIN MATING.
- ROUTE TO INSPECTION.
- SLIDE HEAT SHRINK OVER SOLDER JOINT AND SHRINK.
- USING INDELIBLE INK OF CONTRASTING COLOR, PRINT ASSEMBLY NUMBER, REVISION, LOT NUMBER AND ASSEMBLER INITIALS ON BACK OF CONNECTOR FLANGE
- ROUTE TO INSPECTION.

10	HI14	14.75	SLEEVING, CLEAR PVC, 3/16" ID
9	W032	16.25	22 GAGE, 19 x 34, WHITE, UL-1429
8	W011	16.25	22 GAGE, 19 x 34, GREEN, UL-1429
7	W009	16.25	22 GAGE, 19 x 34, RED, UL-1429
6	W007	16.25	22 GAGE, 19 x 34, BROWN, UL-1429
5	W005	16.25	22 GAGE, 19 x 34, BLACK, UL-1429
4	WT05	2.50	HEAT SHRINK, 3/16" I.D., BLACK
3	PT36	5	CONTACT, CRIMP SOCKET, 22–26 AWG
2	PA338	1	CONN, 5P, SR. HSG, LCKG, .100 CTRS.
1	PA107	1	CONN, 6 PIN SOCKET, MS3102A14S-6S

C	PER ECN #6915	CHY	6NOV98
B	PER ECN #6338	CHY	2FEB98
A	RELEASED, ECN #5603	SR	27OCT97
REV.	DESCRIPTION	BY	DATE

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UNLESS OTHERWISE SPECIFIED TOLERANCES ARE	DRAWN	CHY	4DEC96
.XX = ± .25	DESIGNED	CN	4DEC96
.XXX = ± .015	CHECKED		
ANGLES = ± —	APPROVED		



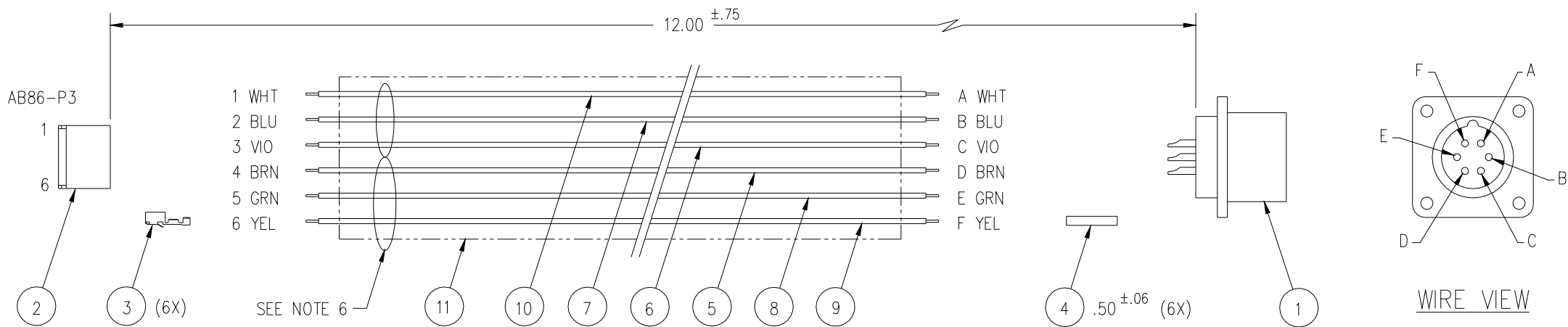
Invivo Research Inc.

PRECISION BIOMEDICAL INSTRUMENTS
Subsidiary of Invivo Corporation

12601 RESEARCH PARKWAY., ORLANDO, FL 32826

TITLE:
ASSEMBLY: AC317
CABLE, PRESS. ISO/PATIENT CONN. 3150

CAD SCALE:	SHEET:	DWG. NO.:	REV.:
1 : 1	1 OF 1	C59B256	C



NOTES:

1. CUT WIRES (ITEMS 5–10) TO 12.25 LENGTH.
2. STRIP ALL WIRES .125 ON ONE END. STRIP AND TIN .250 ON OTHER END.
3. CRIMP P/N PT36 CONTACT (ITEM 3) ON UNTINNED END OF EACH WIRE.
4. ROUTE TO INSPECTION.
5. INSERT CONTACTS INTO P/N PA341A HOUSING (ITEM 2) AS SHOWN, ENSURING CORRECT WIRE TO PIN MATING.
6. TWIST WIRES 1–2 TURNS PER INCH.
7. SLIDE P/N HI14 SLEEVING (ITEM 11) ONTO WIRES FROM THE TINNED END.
8. SLIDE .50 PIECE OF P/N WT01 HEAT SHRINK (ITEM 4) ONTO EACH WIRE.
9. SOLDER WIRES TO P/N PA80 (ITEM 1) AS SHOWN, ENSURING CORRECT WIRE TO PIN MATING.
10. ROUTE TO INSPECTION.
11. SLIDE HEAT SHRINK OVER SOLDER JOINT AND SHRINK.
12. ROUTE TO INSPECTION.
13. USING BLACK INDELIBLE INK, PRINT CABLE DESTINATION ON P/N L057 LABEL (ITEM 12) AND ATTACH TO HOUSING END OF CABLE. CABLE DESTINATION IS INDICATED AT END OF CABLE REQUIRING LABEL.
14. ROUTE TO INSPECTION.

12	L057	1	LABEL, SELF LAMINATING
11	HI14	10.75	SLEEVING, CLEAR PVC, 3/8" ID
10	W032	12.25	22 GAGE, 19 x 34, WHITE, UL-1429
9	W012	12.25	22 GAGE, 19 x 34, YELLOW, UL-1429
8	W011	12.25	22 GAGE, 19 x 34, GREEN, UL-1429
7	W010	12.25	22 GAGE, 19 x 34, BLUE, UL-1429
6	W008	12.25	22 GAGE, 19 x 34, VIOLET, UL-1429
5	W007	12.25	22 GAGE, 19 x 34, BROWN, UL-1429
4	WT01	3.00	HEAT SHRINK, 1/8" I.D., BLACK
3	PT36	6	CONTACT, CRIMP SOCKET, 22-26 AWG
2	PA341A	1	CONN, 6P, SR. HSG, LCKG, .100 CTRS.
1	PA80	1	CONN, ECG, A-3639

A	RELEASED, ECN #5603		
REV.	DESCRIPTION	BY	DATE
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UNLESS OTHERWISE SPECIFIED TOLERANCES ARE .XX = ± .25 .XXX = ± .015 ANGLES = ± —	DRAWN	CHY	4DEC96
	DESIGNED	CN	4DEC96
	CHECKED		
	APPROVED		

INCHES

THIRD ANGLE PROJECTION

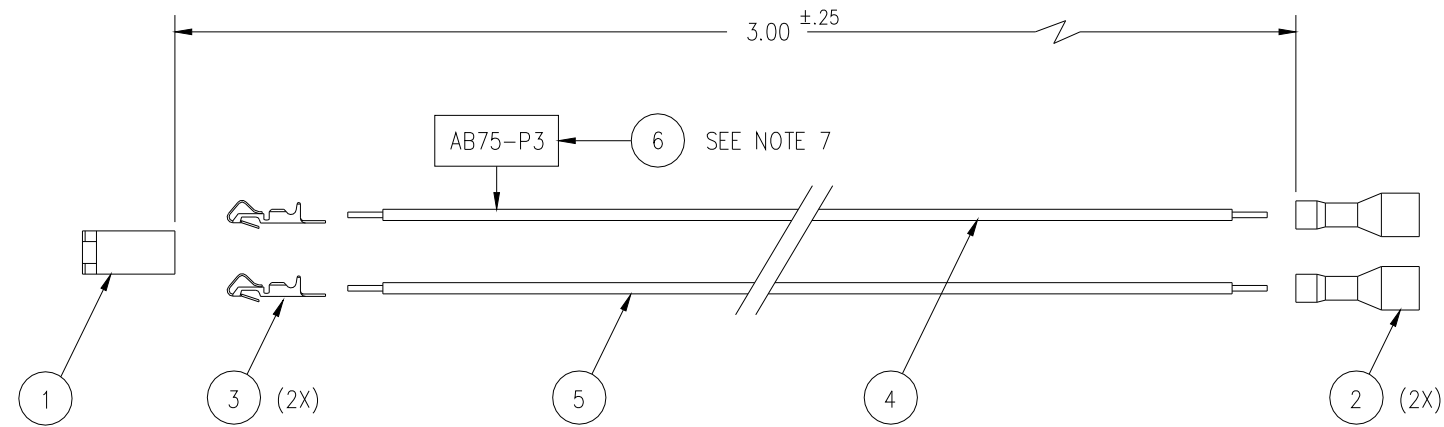
DO NOT SCALE THIS DRAWING !!!



Invivo Research Inc.
PRECISION BIOMEDICAL INSTRUMENTS
Subsidiary of Invivo Corporation
12601 RESEARCH PARKWAY., ORLANDO, FL 32826

TITLE:
ASSEMBLY: AC318
CABLE, ECG ISO/PATIENT CONN. 3150

CAD SCALE: 1 : 1	SHEET: 1 OF 1	DWG. NO.: C59B257	REV.: A
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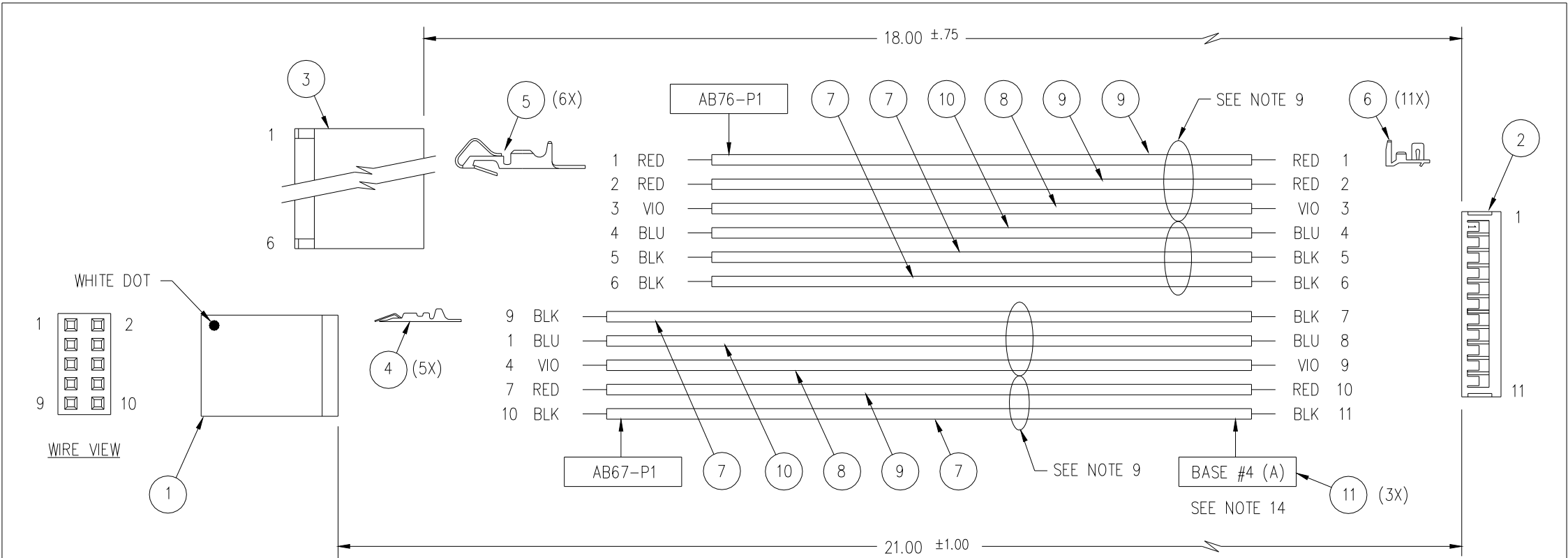


NOTES:

- 1. CUT WIRES (ITEMS 4 & 5) TO 3.38 LENGTH.
- 2. STRIP WIRES .250 ON ONE END AND .125 ON THE OTHER END.
- 3. CRIMP P/N PT14 TERMINAL (ITEM 2) ON THE .250 STRIPPED END AND P/N PT46 CONTACT (ITEM 3) ON THE OTHER END, OF EACH WIRE.
- 4. ROUTE TO INSPECTION.
- 5. INSERT CONTACTS INTO P/N PA342A HOUSING (ITEM 1) AS SHOWN.
- 6. TWIST WIRES 1-2 TURNS PER INCH.
- 7. USING BLACK INDELIBLE INK, PRINT REFERENCE DESIGNATOR OF MATING CONNECTOR ON P/N L057 LABEL (ITEM 6) AND ATTACH TO END OF CABLE, AS SHOWN.
- 8. ROUTE TO INSPECTION.

6	L057	1	LABEL, SELF LAMINATING	
5	W022	3.38	18 GAGE, 19 x 30, RED, UL-1430	
4	W017	3.38	18 GAGE, 19 x 30, BLACK, UL-1430	
3	PT46	2	CONTACT, CRIMP SOCKET, 18-24 AWG	
2	PT14	2	TERMINAL, RCPT, 2-520181-2	
1	PA342A	1	CONN, 2P, SR. HSG, LKG, .156 CTRS.	
ITEM / REF. DES.		PART NO.	QTY.	DESCRIPTION
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE .XX = $\pm .25$.XXX = $\pm .015$ ANGLES = $\pm$ —		DRAWN	CHY	5DEC96
		DESIGNED	CHY	5DEC96
		CHECKED		
		APPROVED		
 THIRD ANGLE PROJECTION DO NOT SCALE THIS DRAWING !!!		TITLE: ASSEMBLY: AC319 CABLE, ON/OFF SWITCH, INTRCNCT. BD, 3150		
		CAD SCALE: 1 : 1	SHEET: 1 OF 1	DWG. NO.: C59B259

B	PER ECN #6688	JWT	25JUN98
A	RELEASED, ECN #5603	SR	27OCT97
REV.	DESCRIPTION	BY	DATE
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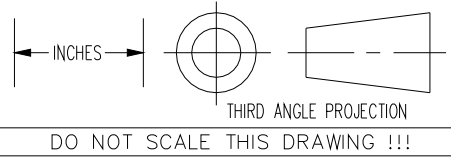


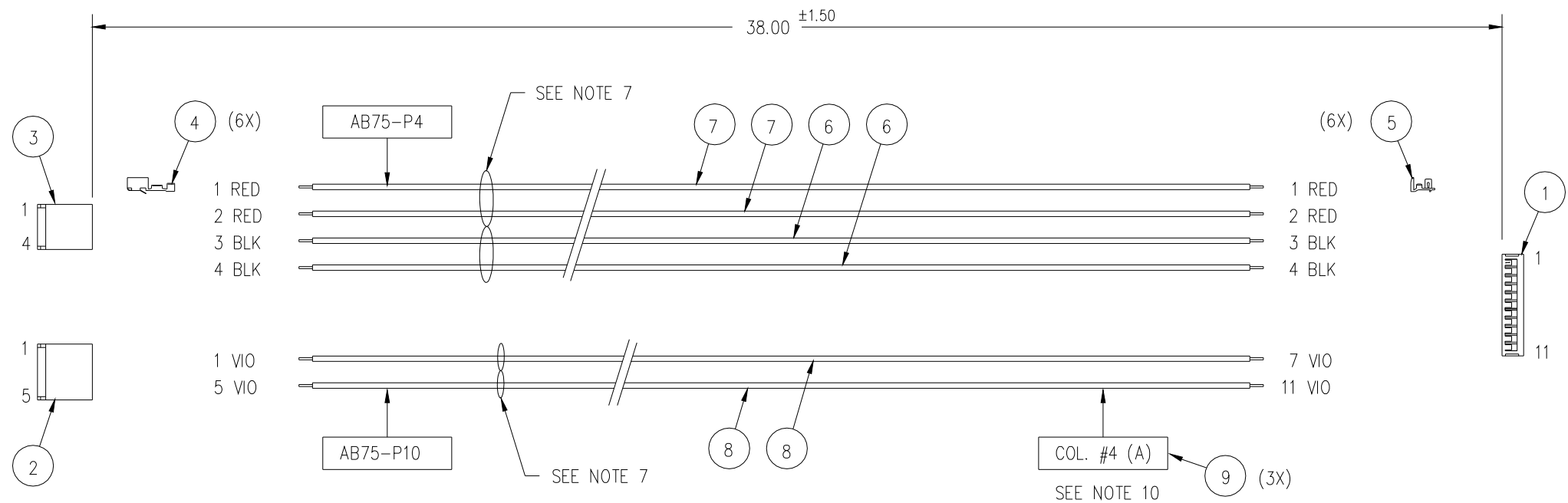
NOTES:

1. CUT SINGLE WIRES (ITEMS 8 & 10), TWO WIRES (ITEMS 7 & 9) TO 18.25 LENGTH.
2. CUT SINGLE WIRES (ITEMS 8, 9 & 10) AND TWO WIRES (ITEM 7) TO 21.25 LENGTH.
3. STRIP ALL WIRES .125 ON ONE END AND .156 ON THE OTHER END.
4. CRIMP P/N PT49 CONTACT (ITEM 6) ON THE .156 STRIPPED END OF EACH WIRE.
5. CRIMP P/N PT07 CONTACT (ITEM 4) ONTO 21.25 WIRES.
6. CRIMP P/N PT46 CONTACT (ITEM 5) ONTO 18.25 WIRES.
7. ROUTE TO INSPECTION.
8. INSERT CONTACTS INTO P/N PA313A HOUSING (ITEM 2) AS SHOWN, ENSURING CORRECT WIRE TO PIN MATING.
9. TWIST 1-2 TURNS PER INCH IN GROUPS AS INDICATED.
10. INSERT CONTACTS INTO P/Ns PA307 & PA343A HOUSINGS (ITEMS 1 & 3) AS SHOWN, ENSURING CORRECT WIRE TO PIN MATING.
11. USING WHITE INDELIBLE INK OR PAINT, PUT A DOT ON HOUSING , LOCATED AS SHOWN TO INDICATE PIN ONE.
13. ROUTE TO INSPECTION.
14. USING BLACK INDELIBLE INK, PRINT REFERENCE DESIGNATOR OF MATING CONNECTOR ON P/N L057 LABEL (ITEM 11) AND ATTACH TO EACH END OF CABLE, AS SHOWN.
15. ROUTE TO INSPECTION.

11	L057	3	LABEL, SELF LAMINATING
10	W010	39.50	22 GAGE, 19 X 34 BLU UL-1429
9	W009	57.75	22 GAGE, 19 X 34 RED UL-1429
8	W008	39.50	22 GAGE, 19 X 34 VIO UL-1429
7	W005	79.00	22 GAGE, 19 X 34 BLK UL-1429
6	PT49	11	CONTACT, CRIMP SOCKET, 26-22 AWG
5	PT46	6	CONTACT, CRIMP SOCKET, 18-24AWG
4	PT07	5	CNTCT, LKG. CLP, 26-22AWG, REEL
3	PA343A	1	CONN, 6P, SR, HSG, LKG, .156 CTRS.
2	PA313A	1	CONN, 11P, SR. HSG, .079 CTRS.
1	PA307	1	CONN, 10P, DR, HSG, .100 CTRS.
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE .XX = ± .25 .XXX = ± .015 ANGLES = ± —	DRAWN	SR	4MAR97
	DESIGNED	CN	27JAN97
	CHECKED		
	APPROVED		
TITLE: ASSEMBLY: AC336 CABLE, POWER & SERIAL I/O, 3150			
CAD SCALE:	SHEET:	DWG. NO.:	REV.:
2 : 1	1 OF 1	C59B327	D

D	PER ECN #8469	CHY	11SEP01
C	PER ECN #7036	CHY	5FEB99
B	PER ECN #6199	SR	10NOV97
A	RELEASED, ECN #5603	SR	27OCT97
REV.	DESCRIPTION	BY	DATE
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NOTES:

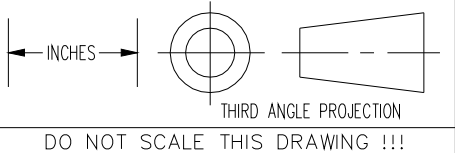
1. CUT TWO WIRES (ITEMS 6, 7 & 8) TO 38.25 LENGTH.
2. STRIP ALL WIRES .125 ON ONE END AND .156 ON THE OTHER END.
3. CRIMP P/N PT36 CONTACT (ITEM 4) ON .125 STRIPPED END OF EACH WIRE.
4. CRIMP P/N PT49 CONTACT (ITEM 5) ON THE OTHER END OF EACH WIRE.
5. ROUTE TO INSPECTION.
6. INSERT CONTACTS INTO P/N PA313A HOUSING (ITEM 1) AS SHOWN, ENSURING CORRECT WIRE TO PIN MATING.
7. TWIST WIRES 1-2 TURNS PER INCH.
8. INSERT CONTACTS INTO P/Ns PA339 & PA344A HOUSINGS (ITEMS 2 & 3) AS SHOWN ENSURING CORRECT WIRE TO PIN MATING.
9. ROUTE TO INSPECTION.
10. USING BLACK INDELIBLE INK, PRINT REFERENCE DESIGNATOR OF MATING CONNECTOR ON P/N L057 LABEL (ITEM 9) AND ATTACH TO EACH END OF CABLE, AS SHOWN.
11. ROUTE TO INSPECTION.

9	L057	3	LABEL, SELF LAMINATING
8	W082	76.50	WIRE, 24 GA, 7 X 32, VIOLET, UL-1430
7	W009	76.50	22 GAGE, 19 x 34, RED, UL-1429
6	W005	76.50	22 GAGE, 19 x 34, BLK, UL-1429
5	PT49	6	CONTACT, CRIMP SOCKET, 26-22 AWG
4	PT36	6	CONTACT, CRIMP SOCKET, 22-26 AWG
3	PA344A	1	CONN, 4P, SR. HSG, LCKG, .100 CTRS.
2	PA338	1	CONN, 5P, SR. HSG, LCKG, .100 CTRS.
1	PA313A	1	CONN, 11P, SR, HSG, .079 CTRS.

B	PER ECN #6199	SR	10NOV97
A	RELEASED, ECN #5603	SR	27OCT97
REV.	DESCRIPTION	BY	DATE

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UNLESS OTHERWISE SPECIFIED TOLERANCES ARE .XX = ± .25 .XXX = ± .015 ANGLES = ± —	DRAWN	SR	17MAR97
	DESIGNED	CN	4DEC96
	CHECKED		
	APPROVED		



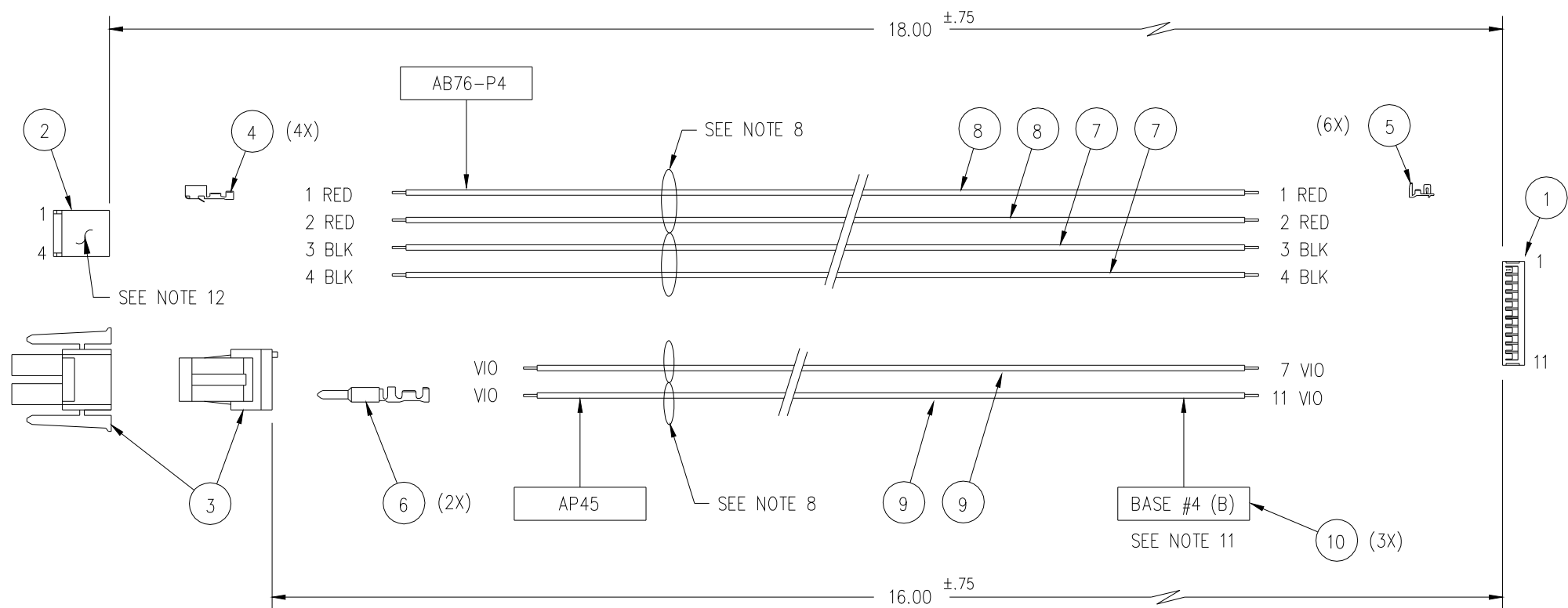
Invivo Research Inc.

PRECISION BIOMEDICAL INSTRUMENTS
Subsidiary of Invivo Corporation

12601 RESEARCH PARKWAY., ORLANDO, FL 32826

TITLE:
ASSEMBLY: AC337
CAB, ON-OFF/HV INVERTER (TOP), 3150

CAD SCALE: 1 : 1	SHEET: 1 OF 1	DWG. NO.: C59B328	REV.: B
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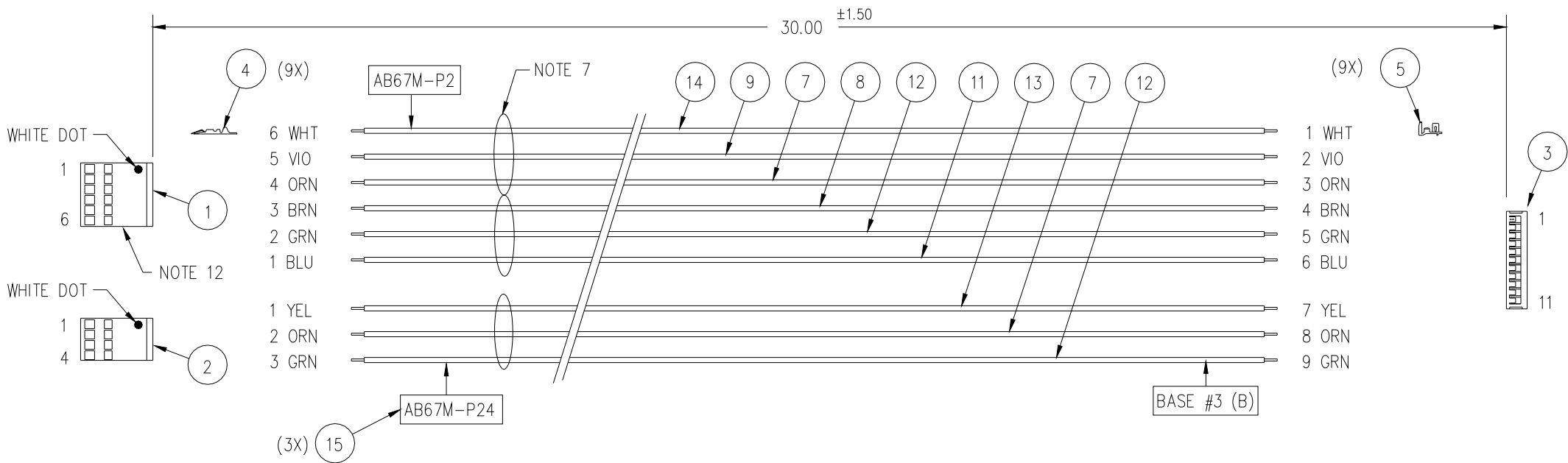


NOTES:

1. CUT TWO WIRES (ITEMS 7 & 8) TO 18.25 LENGTH. STRIP .125 ON ONE END AND .156 ON THE OTHER END.
2. CUT TWO WIRES (ITEM 9) TO 16.25 LENGTH. STRIP .188 ON ONE END AND .156 ON THE OTHER END.
3. CRIMP P/N PT51 CONTACT (ITEM 6) ON .188 STRIPPED END OF VIOLET WIRES.
4. CRIMP P/N PT36 CONTACT (ITEM 4) ON .125 END OF RED, AND BLACK WIRES.
5. CRIMP P/N PT49 CONTACT (ITEM 5) ONTO THE REMAINING ENDS OF WIRES.
6. ROUTE TO INSPECTION.
7. INSERT CONTACTS INTO P/N PA313A HOUSING (ITEMS 1) AS SHOWN, ENSURING CORRECT WIRE TO PIN MATING.
8. TWIST WIRES 1-2 TURNS PER INCH.
9. INSERT CONTACTS INTO P/Ns PA349A & PA351 HOUSINGS (ITEMS 2 & 3) AS SHOWN, ENSURING CORRECT WIRE TO PIN MATING.
10. ROUTE TO INSPECTION.
11. USING BLACK INDELIBLE INK, PRINT REFERENCE DESIGNATOR OF MATING CONNECTOR ON P/N L057 LABEL (ITEM 10) AND ATTACH TO EACH END OF CABLE, AS SHOWN.
12. PRINT ASSEMBLY NUMBER, REVISION, LOT NUMBER AND ASSEMBLER INITIALS ON HOUSING. USE BOTH SIDES IF NECESSARY.
13. ROUTE TO INSPECTION.

10	L057	3	LABEL, SELF LAMINATING
9	W082	32.50	WIRE, 24 GA, 7 X 32, VIOLET, UL-1430
8	W009	36.50	22 GAGE, 19 x 34, RED, UL-1429
7	W005	36.50	22 GAGE, 19 x 34, BLK, UL-1429
6	PT51	2	CONTACT, CRIMP PIN, 24-18 AWG
5	PT49	6	CONTACT, CRIMP SOCKET, 26-22 AWG
4	PT36	4	CONTACT, CRIMP SOCKET, 22-26 AWG
3	PA351	1	CONN, 2P, MATENLOK, PLUG KIT, .250 CTRS.
2	PA344A	1	CONN, 4P, SR. HSG, LCKG, .100 CTRS.
1	PA313A	1	CONN, 11P, SR, HSG, .079 CTRS.
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE .XX = ± .25 .XXX = ± .015 ANGLES = ± —	DRAWN	SR	17MAR97
	DESIGNED	CN	4DEC96
	CHECKED		
	APPROVED		
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DO NOT SCALE THIS DRAWING !!!			
THIRD ANGLE PROJECTION			
TITLE: ASSEMBLY: AC338 CAB, ON-OFF/HV INVERTER (BASE), 3150			
CAD SCALE: 1 : 1	SHEET: 1 OF 1	DWG. NO.: C59B329	REV.: C

 **Invivo Research Inc.**
PRECISION BIOMEDICAL INSTRUMENTS
Subsidiary of Invivo Corporation
12601 RESEARCH PARKWAY., ORLANDO, FL 32826



NOTES:

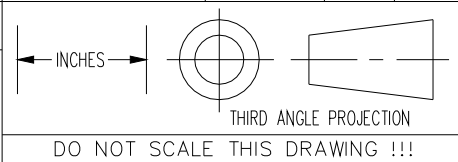
- CUT SINGLE WIRES (ITEMS 8, 9, 11, 13 & 14) AND TWO WIRES (ITEMS 7 & 12) TO 30.25 LENGTH.
- STRIP WIRES LEFT END FOR PT07 CONTACT, RIGHT END FOR PT49 CONTACT PER AI046.
- CRIMP P/N PT07 CONTACT (ITEM 4) ON THE LEFT END OF EACH WIRE.
- CRIMP P/N PT49 CONTACT (ITEM 5) ON THE RIGHT END OF EACH WIRE.
- ROUTE TO INSPECTION.
- INSERT CONTACTS INTO P/N PA313A HOUSING (ITEM 3) AS SHOWN, ENSURING CORRECT WIRE TO PIN MATING.
- TWIST WIRES 1-2 TURNS PER INCH IN TWO SEPARATE BUNDLES AS SHOWN.
- INSERT CONTACTS INTO P/Ns PA10 & PA17 HOUSINGS (ITEMS 1 & 2) AS SHOWN, ENSURING CORRECT WIRE TO PIN MATING.
- USING WHITE INDELIBLE INK OR PAINT, PUT A DOT ON HOUSINGS, LOCATED AS SHOWN TO INDICATE PIN ONE.
- ROUTE TO INSPECTION.
- USING BLACK INDELIBLE INK, PRINT CABLE CONNECTION ON P/N L057 LABEL (ITEM 15) AND ATTACH TO EACH END OF CABLE. CABLE CONNECTION IS INDICATED AT THE END OF EACH CABLE.
- USING INDELIBLE INK OF CONTRASTING COLOR, PRINT ASSEMBLY NUMBER, REVISION, LOT NUMBER AND ASSEMBLER INITIALS. USE BOTH SURFACES OF CONNECTOR IF NEEDED.
- ROUTE TO INSPECTION.

C	PER ECN #7610	KCO	14JUN00
B	PER ECN #6336	CHY	2FEB98
A	RELEASED, ECN #5603	SR	27OCT97
REV.	DESCRIPTION	BY	DATE

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15	L057	3	LABEL, SELF LAMINATING
14	W032	30.25	22 GAGE, 19 x 34, WHT, UL-1429
13	W012	30.25	22 GAGE, 19 x 34, YEL, UL-1429
12	W011	60.50	22 GAGE, 19 x 34, GRN, UL-1429
11	W010	30.25	22 GAGE, 19 x 34, BLU, UL-1429
10			
9	W008	30.25	22 GAGE, 19 x 34, VIO, UL-1429
8	W007	30.25	22 GAGE, 19 x 34, BRN, UL-1429
7	W006	60.50	22 GAGE, 19 x 34, ORN, UL-1429
6			
5	PT49	9	CONTACT, CRIMP SOCKET, 26-22 AWG
4	PT07	9	CONTACT, CRIMP SOCKET, 22-26 AWG
3	PA313A	1	CONN, 11P, SR, HSG, .079 CTRS.
2	PA17	1	HOUSING, SR, 4 PIN (.10)
1	PA10	1	CONN, 6P, SR, RCPT, (.10)

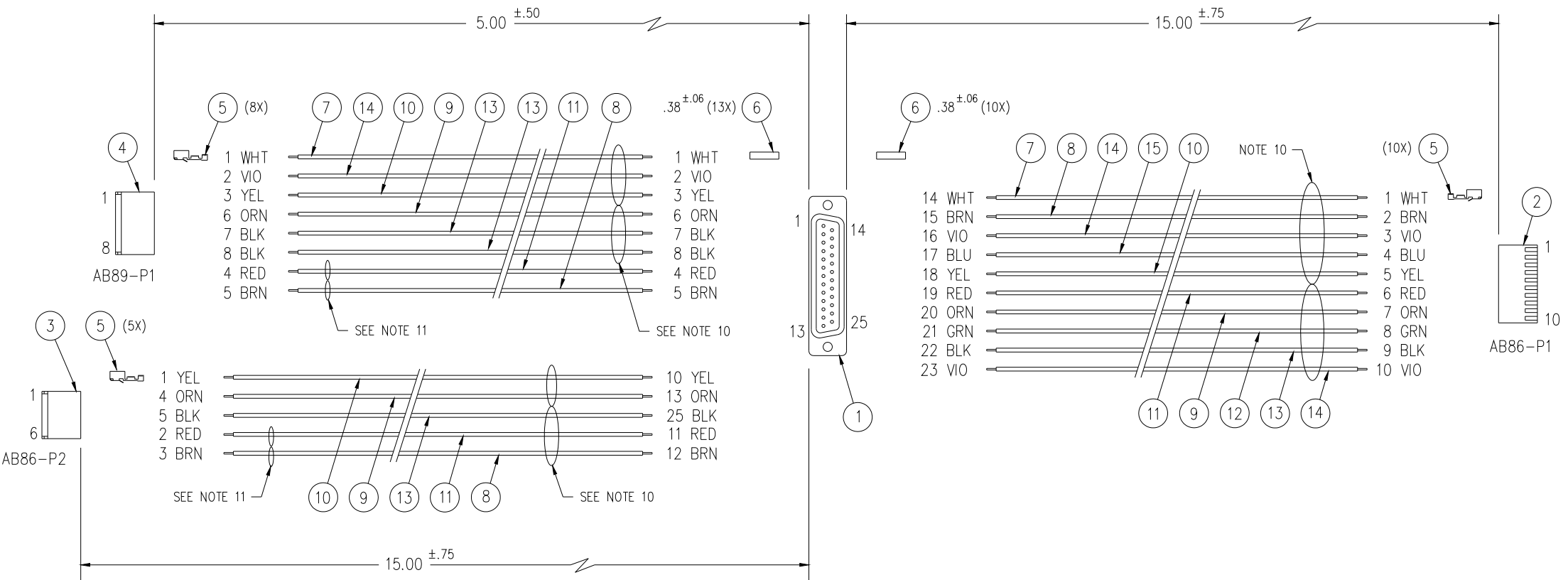
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE	DRAWN	SR	19MAR97
.XX = ± .25	DESIGNED	CN	4DEC96
.XXX = ± .015	CHECKED		
ANGLES = ± —	APPROVED		



 **Invivo Research Inc.**
PRECISION BIOMEDICAL INSTRUMENTS
Subsidiary of Invivo Corporation
12601 RESEARCH PARKWAY., ORLANDO, FL 32826

TITLE:
ASSEMBLY: AC342
CABLE, KEYPAD/SPEAKER (BASE), 3150

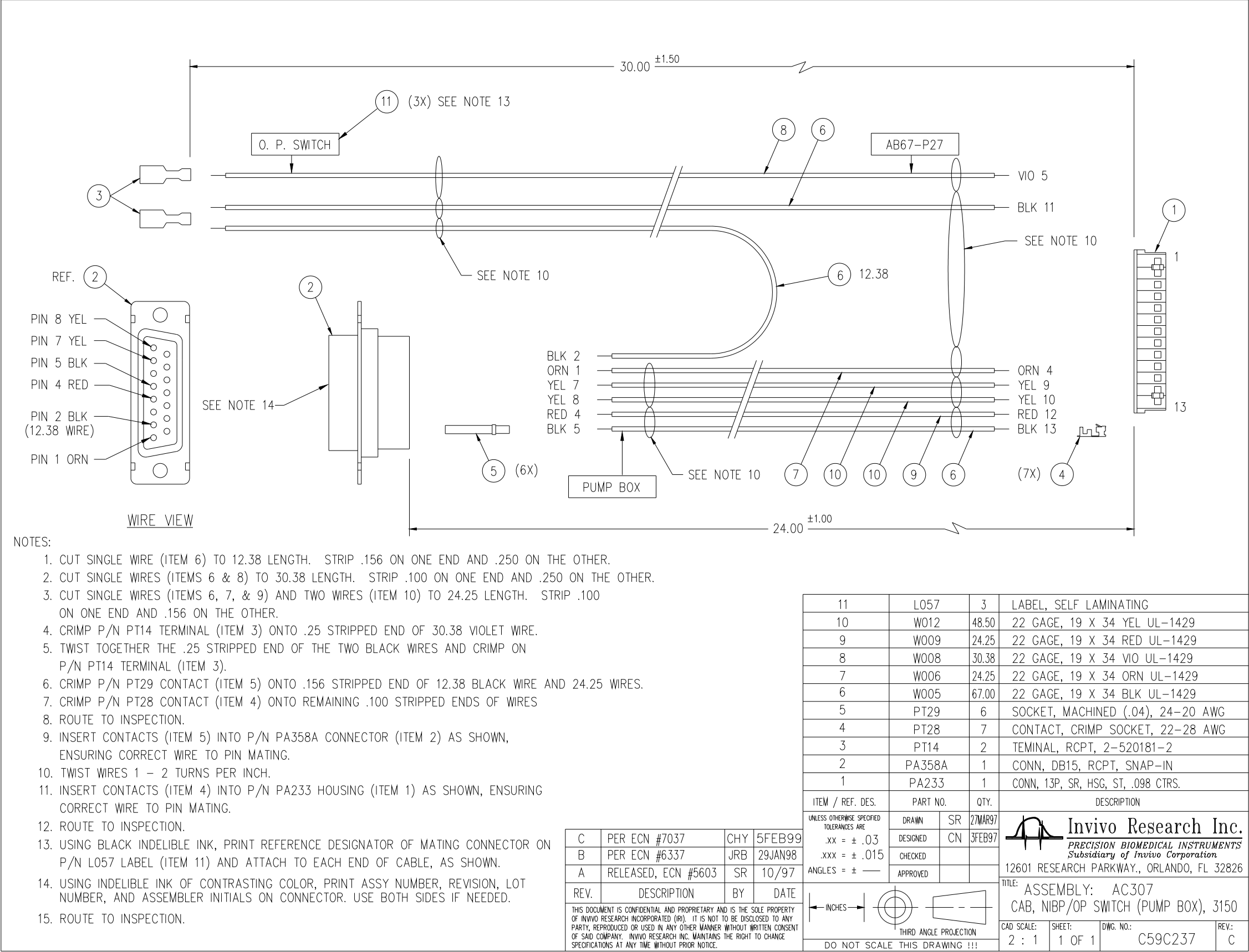
CAD SCALE: 1 : 1	SHEET: 1 OF 1	DWG. NO.: C59B333	REV.: C
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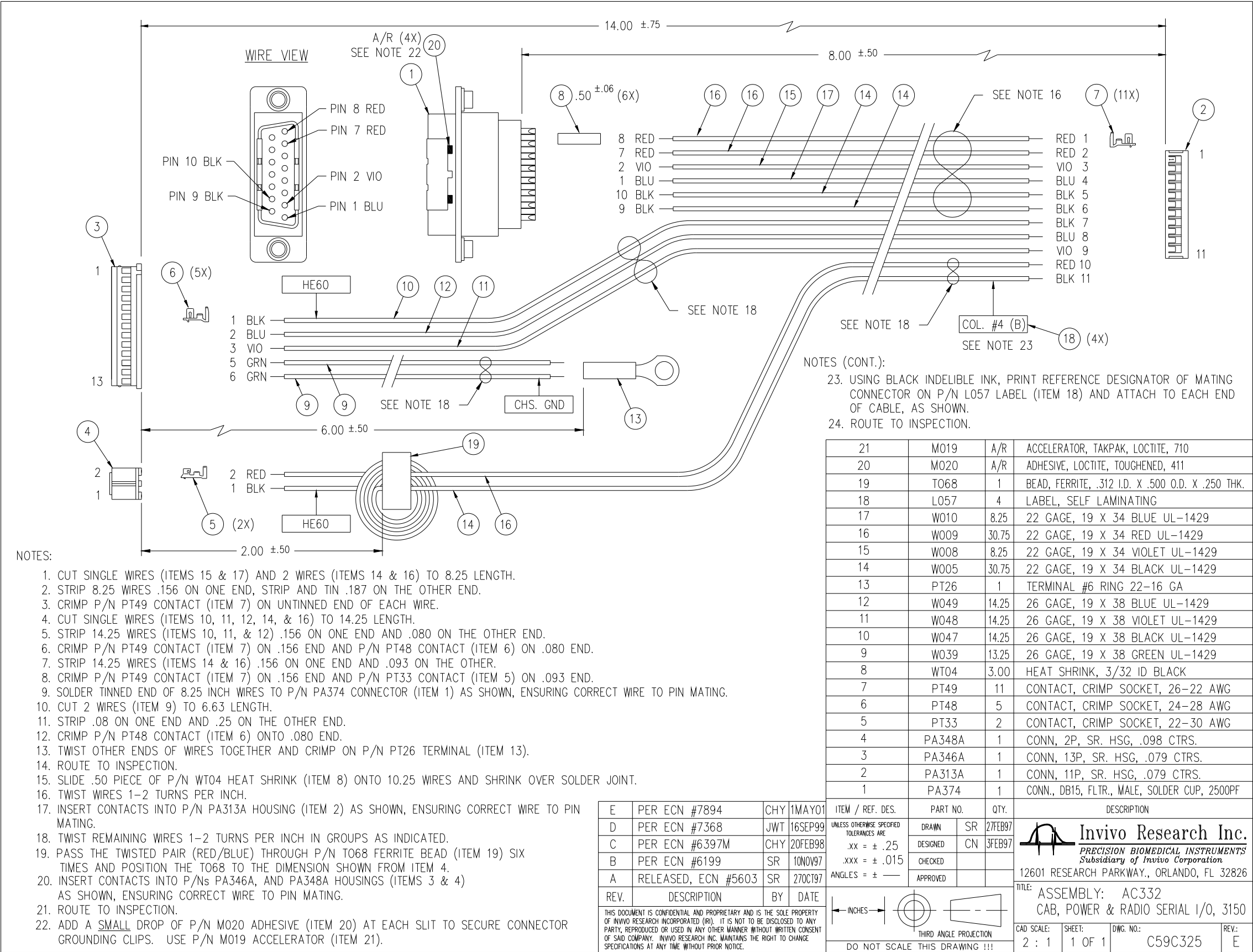


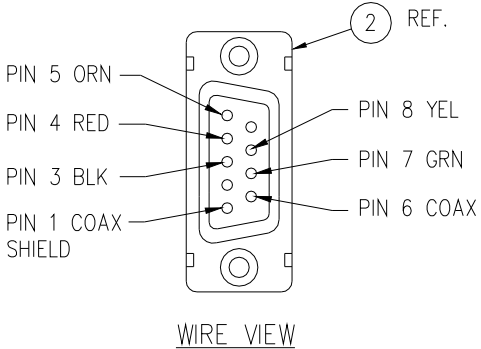
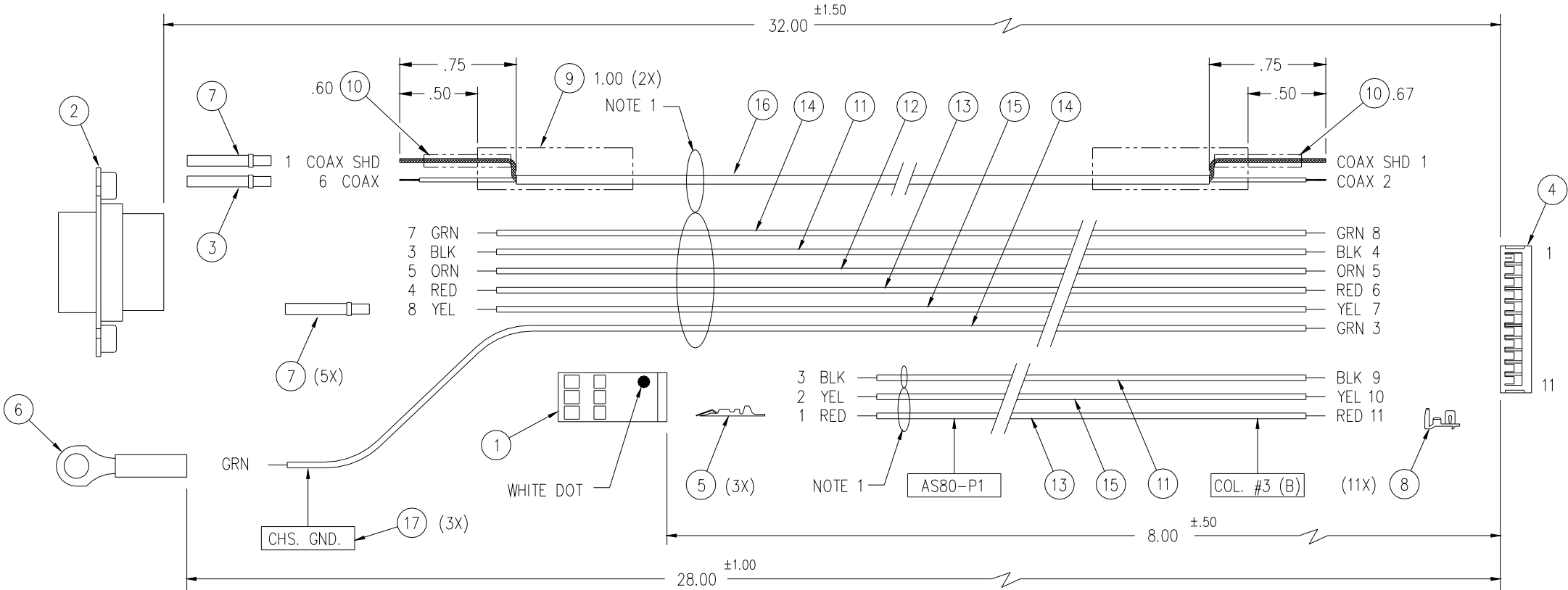
- NOTES:
- CUT SINGLE WIRES (ITEMS 7, 8, 9, 10, 11, & 14) AND TWO WIRES (ITEM 13) TO 5.25 LENGTH.
 - CUT SINGLE WIRES (ITEMS 7, 12 & 15) AND TWO WIRES (ITEMS 8, 9, 10, 11, 13 & 14) TO 15.25 LENGTH.
 - STRIP ALL WIRES .125 ON ONE END AND .156 ON THE OTHER END. TIN .156 STRIPPED END.
 - CRIMP P/N PT36 CONTACT (ITEM 5) ONTO UNTINNED END OF EACH WIRE.
 - ROUTE TO INSPECTION.
 - SLIDE .38 PIECE OF P/N WT04 HEAT SHRINK (ITEM 6) ONTO EACH WIRE.
 - SOLDER TINNED ENDS OF WIRES TO P/N PA223A CONNECTOR (ITEM 1) AS SHOWN, ENSURING CORRECT WIRE TO PIN MATING.
 - ROUTE TO INSPECTION.
 - SLIDE HEAT SHRINK OVER SOLDER JOINT AND SHRINK.
 - TWIST WIRES 1-2 TURNS PER INCH.
 - TWIST RED AND BROWN WIRES 4 TURNS PER INCH.
 - INSERT CONTACTS INTO P/Ns PA306A, PA341A, & PA354A HOUSINGS (ITEMS 2, 3, & 4) AS SHOWN, ENSURING CORRECT WIRE TO PIN MATING.
 - ROUTE TO INSPECTION.
 - USING BLACK INDELIBLE INK, PRINT CABLE DESTINATION ON P/N L057 (ITEM 16) AND ATTACH TO EACH CABLE END. CABLE DESTINATION IS INDICATED AT THE END OF EACH CABLE REQUIRING LABELING.
 - ROUTE TO INSPECTION.

A	RELEASED, ECN #5603		
REV.	DESCRIPTION	BY	DATE
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16	L057	3	LABEL, SELF LAMINATING
15	W049	15.25	26 GAGE, 19 X 38 BLU UL-1429
14	W048	35.75	26 GAGE, 19 X 38 VIO UL-1429
13	W047	41.00	26 GAGE, 19 X 38 BLK UL-1429
12	W039	15.25	26 GAGE, 19 X 38 GRN UL-1429
11	W038	35.75	26 GAGE, 19 X 38 RED UL-1429
10	W037	35.75	26 GAGE, 19 X 38 YEL UL-1429
9	W036	35.75	26 GAGE, 19 X 38 ORN UL-1429
8	W035	35.75	26 GAGE, 19 X 38 BRN UL-1429
7	W030	20.50	26 GAGE, 19 X 38 WHT UL-1429
6	WT04	8.75	HEAT SHRINK, 3/32 ID, BLACK
5	PT36	23	CONTACT, CRIMP SOCKET, 22-26 AWG
4	PA354A	1	CONN, 8P, SR, HSG, LKG, .100 CTRS.
3	PA341A	1	CONN, 6P, SR, HSG, LKG, .100 CTRS.
2	PA306A	1	CONN, 10P, SR, HSG, LKG, .100 CTRS.
1	PA223A	1	CONN, FILTER, DB25, FEMALE, SOLDER CUP, 2500pF
ITEM / REF. DES.		PART NO.	QTY.
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE		DRAWN	SR 21MAR97
.XX = ± .25		DESIGNED	CN 3FEB97
.XXX = ± .015		CHECKED	
ANGLES = ± —		APPROVED	
DESCRIPTION			
 Invivo Research Inc. <i>PRECISION BIOMEDICAL INSTRUMENTS</i> <i>Subsidiary of Invivo Corporation</i> 12601 RESEARCH PARKWAY., ORLANDO, FL 32826			
TITLE: ASSEMBLY: AC306 CAB, ECG/PRES. ISO (FILTER BOX), 3150			
CAD SCALE:	SHEET:	DWG. NO.:	REV.:
1 : 1	1 OF 1	C59C236	A





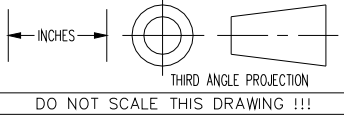


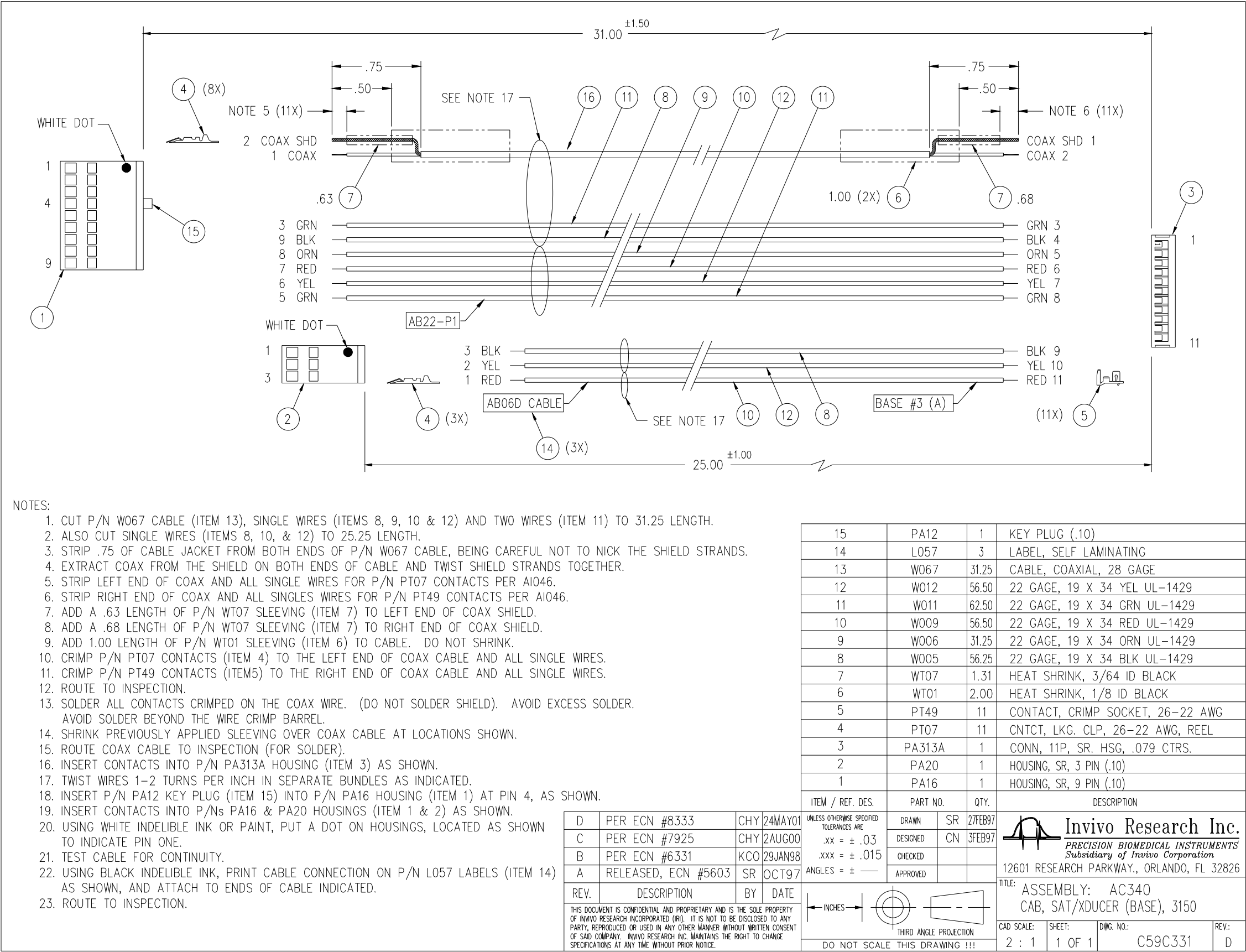
NOTES:
1. TWIST 1-2 TURNS PER INCH.

REF. ASSEMBLY INSTRUCTIONS AIO47

C	PER ECN #7892	CHY	10JUL00
B	PER ECN #6199	SR	10NOV97
A	RELEASED, ECN #5603	SR	27OCT97
REV.	DESCRIPTION	BY	DATE
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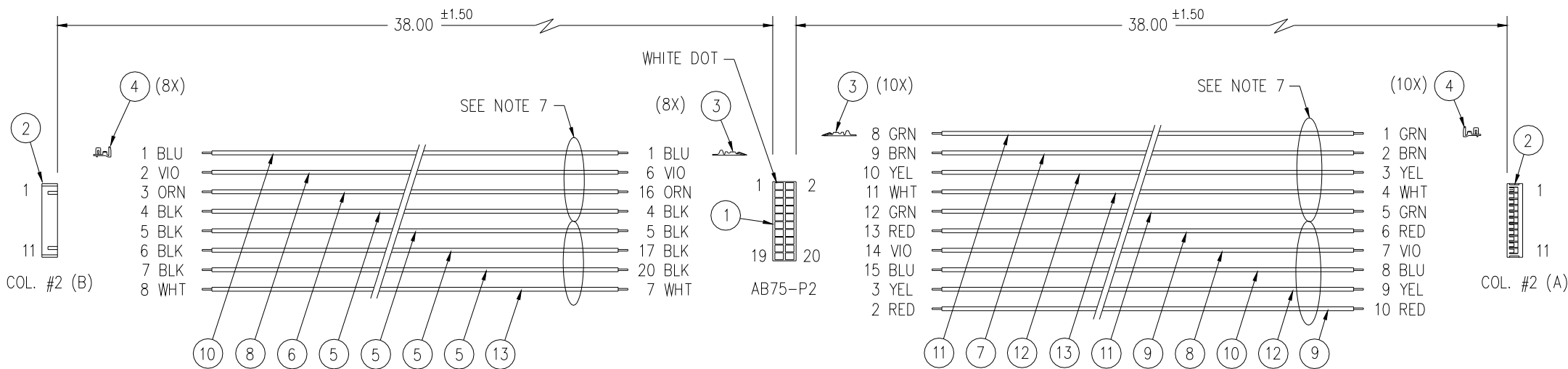
17	L057	3	LABEL, SELF LAMINATING
16	W067	32.50	CABLE, COAXIAL, 28 GAGE
15	W012	41.00	22 GAGE, 19 X 34 YEL UL-1429
14	W011	61.25	22 GAGE, 19 X 34 GRN UL-1429
13	W009	41.00	22 GAGE, 19 X 34 RED UL-1429
12	W006	32.50	22 GAGE, 19 X 34 ORN UL-1429
11	W005	41.00	22 GAGE, 19 X 34 BLK UL-1429
10	WT07	1.27	HEAT SHRINK, 3/64 ID BLACK
9	WT01	2.00	HEAT SHRINK, 1/8 ID BLACK
8	PT49	11	CONTACT, CRIMP SOCKET, 26-22 AWG
7	PT29	6	SOCKET, MACHINED (.04), 24-20 AWG
6	PT26	1	TERMINAL #6 RING 22-16 GA
5	PT07	3	CNTCT, LKG. CLP, 26-22 AWG, REEL
4	PA313A	1	CONN, 11P, SR. HSG, .079 CTRS.
3	PA243	1	CONTACT, SKT, 28-26 AWG, MACHINED
2	PA225	1	CONN, DB9 RCPT, SNP-IN W/CLNCHNUT
1	PA20	1	HOUSING, SR, 3 PIN (.10)
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE	DRAWN	SR	27FEB97
.XX = ± .03	DESIGNED	CN	3FEB97
.XXX = ± .015	CHECKED		
ANGLES = ± —	APPROVED		
Invivo Research Inc. PRECISION BIOMEDICAL INSTRUMENTS Subsidiary of Invivo Corporation 12601 RESEARCH PARKWAY., ORLANDO, FL 32826			
TITLE: ASSEMBLY: AC339 CAB, SAT/XDUCER (TOP), 3150			
CAD SCALE: 2 : 1	SHEET: 1 OF 1	DWG. NO.: C59C330	REV.: C





D	PER ECN #8333	CHY	24MAY01
C	PER ECN #7925	CHY	2AUG00
B	PER ECN #6331	KCO	29JAN98
A	RELEASED, ECN #5603	SR	OCT97
REV.	DESCRIPTION	BY	DATE
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15	PA12	1	KEY PLUG (.10)
14	L057	3	LABEL, SELF LAMINATING
13	W067	31.25	CABLE, COAXIAL, 28 GAGE
12	W012	56.50	22 GAGE, 19 X 34 YEL UL-1429
11	W011	62.50	22 GAGE, 19 X 34 GRN UL-1429
10	W009	56.50	22 GAGE, 19 X 34 RED UL-1429
9	W006	31.25	22 GAGE, 19 X 34 ORN UL-1429
8	W005	56.25	22 GAGE, 19 X 34 BLK UL-1429
7	WT07	1.31	HEAT SHRINK, 3/64 ID BLACK
6	WT01	2.00	HEAT SHRINK, 1/8 ID BLACK
5	PT49	11	CONTACT, CRIMP SOCKET, 26-22 AWG
4	PT07	11	CNTCT, LKG. CLP, 26-22 AWG, REEL
3	PA313A	1	CONN, 11P, SR. HSG, .079 CTRS.
2	PA20	1	HOUSING, SR, 3 PIN (.10)
1	PA16	1	HOUSING, SR, 9 PIN (.10)
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE	DRAWN	SR	27FEB97
.XX = ± .03	DESIGNED	CN	3FEB97
.XXX = ± .015	CHECKED		
ANGLES = ± —	APPROVED		
Invivo Research Inc. PRECISION BIOMEDICAL INSTRUMENTS Subsidiary of Invivo Corporation 12601 RESEARCH PARKWAY., ORLANDO, FL 32826			
TITLE: ASSEMBLY: AC340 CAB, SAT/XDUCER (BASE), 3150			
CAD SCALE:	SHEET:	DWG. NO.:	REV.:
2 : 1	1 OF 1	C59C331	D

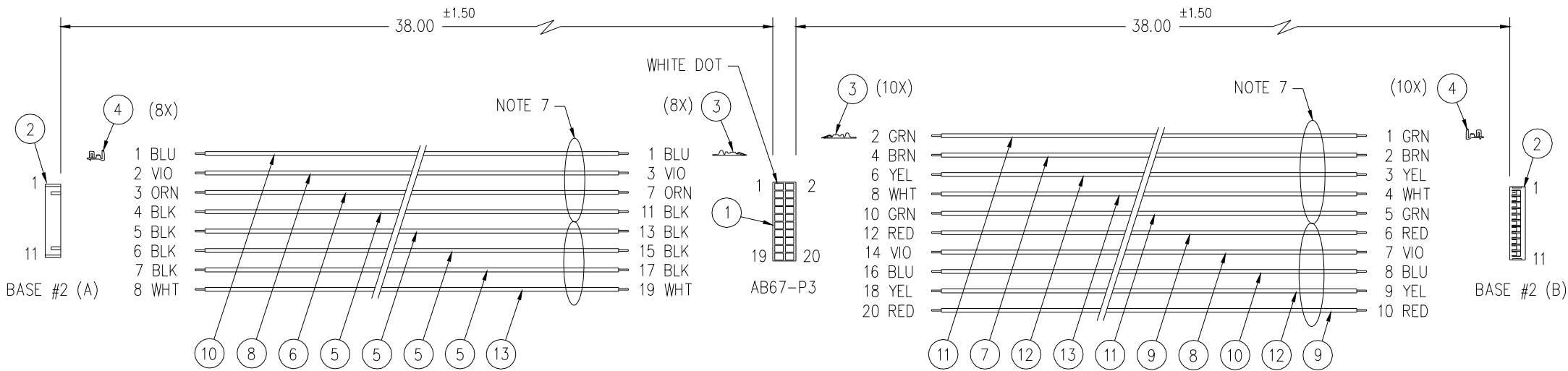


NOTES:

- CUT SINGLE WIRES (ITEMS 6 & 7), TWO WIRES (ITEMS 8, 9, 10, 11, 12, & 13) AND FOUR WIRES (ITEM 5) TO 38.25 LENGTH.
- STRIP ALL WIRES .125 ON ONE END AND .156 ON THE OTHER END.
- CRIMP P/N PT07 CONTACT (ITEM 3) ONTO THE .125 STRIPPED ENDS.
- CRIMP P/N PT49 CONTACT (ITEM 4) ONTO THE .156 STRIPPED ENDS.
- ROUTE TO INSPECTION.
- INSERT CONTACTS INTO P/N PA313A HOUSINGS (ITEM 2) AS SHOWN, ENSURING CORRECT WIRE TO PIN MATING.
- TWIST WIRES 1-2 TURNS PER INCH.
- INSERT CONTACTS INTO P/N PA308 HOUSING (ITEM 1) AS SHOWN, ENSURING CORRECT WIRE TO PIN MATING.
- USING WHITE INDELIBLE INK OR PAINT, PUT A DOT ON P/N PA308 HOUSING, LOCATED AS SHOWN, TO INDICATE PIN ONE.
- ROUTE TO INSPECTION.
- USING BLACK INDELIBLE INK, PRINT CABLE DESTINATION ON P/N L057 LABEL (ITEM 14) AND ATTACH TO EACH END OF CABLE. CABLE DESTINATION IS INDICATED AT END OF EACH CABLE.
- ROUTE TO INSPECTION.

A	RELEASED, ECN #5603		
REV.	DESCRIPTION	BY	DATE
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14	L057	3	LABEL, SELF LAMINATING
13	W032	76.50	22 GAGE, 19 X 34 WHT UL-1429
12	W012	76.50	22 GAGE, 19 X 34 YEL UL-1429
11	W011	76.50	22 GAGE, 19 X 34 GRN UL-1429
10	W010	76.50	22 GAGE, 19 X 34 BLU UL-1429
9	W009	76.50	22 GAGE, 19 X 34 RED UL-1429
8	W008	76.50	22 GAGE, 19 X 34 VIO UL-1429
7	W007	38.25	22 GAGE, 19 X 34 BRN UL-1429
6	W006	38.25	22 GAGE, 19 X 34 ORN UL-1429
5	W005	153.00	22 GAGE, 19 X 34 BLK UL-1429
4	PT49	18	CONTACT, CRIMP SOCKET, 26-22 AWG
3	PT07	18	CNTCT, LKG. CLP, 26-22 AWG, REEL
2	PA313A	2	CONN, 11P, SR. HSG, .079 CTRS.
1	PA308	1	CONN, 20P, DR. HSG, ST, .100 CTRS.
ITEM / REF. DES.		PART NO.	QTY.
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE		DRAWN	SR 27FEB97
.XX = ± .25		DESIGNED	CN 3FEB97
.XXX = ± .015		CHECKED	
ANGLES = ± —		APPROVED	
DESCRIPTION			
 Invivo Research Inc. <i>PRECISION BIOMEDICAL INSTRUMENTS</i> <i>Subsidiary of Invivo Corporation</i> 12601 RESEARCH PARKWAY., ORLANDO, FL 32826			
TITLE: ASSEMBLY: AC343 CAB, LCD DRIVE (TOP), 3150			
CAD SCALE:	SHEET:	DWG. NO.:	REV.:
1 : 1	1 OF 1	C59C334	A

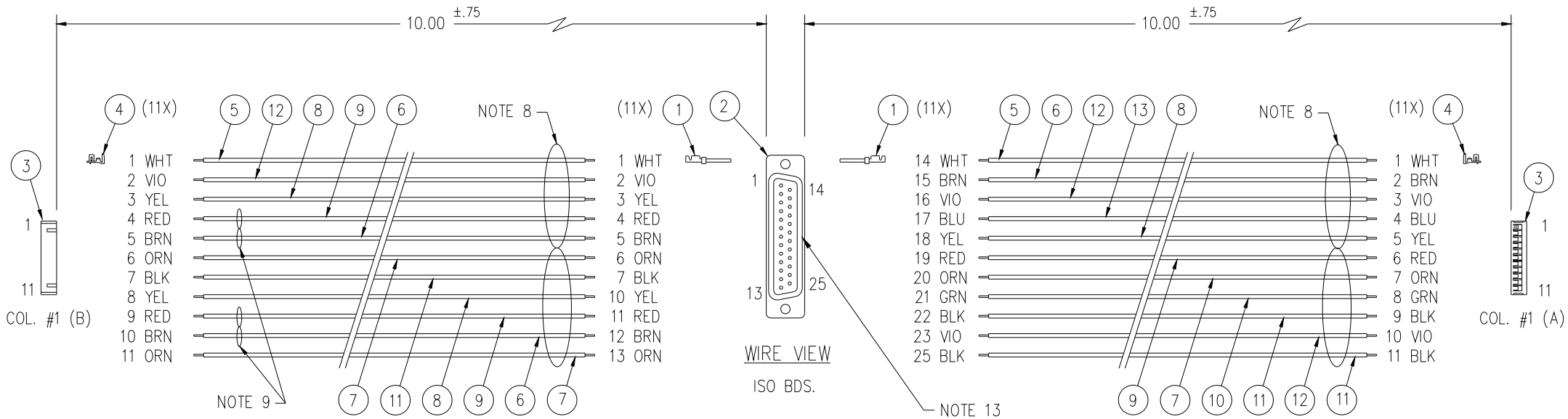


NOTES:

- CUT SINGLE WIRES (ITEMS 6 & 7), TWO WIRES (ITEMS 8, 9, 10, 11, 12, & 13) AND FOUR WIRES (ITEM 5) TO 38.25 LENGTH.
- STRIP ALL WIRES .125 ON ONE END AND .156 ON THE OTHER END.
- CRIMP P/N PT07 CONTACT (ITEM 3) ON THE .125 STRIPPED END OF EACH WIRE.
- CRIMP P/N PT49 CONTACT (ITEM 4) ON THE .156 STRIPPED END OF EACH WIRE.
- ROUTE TO INSPECTION.
- INSERT CONTACTS INTO P/N PA308 HOUSING (ITEM 1) AS SHOWN, ENSURING CORRECT WIRE TO PIN MATING.
- TWIST WIRES 1-2 TURNS PER INCH.
- INSERT CONTACTS INTO P/N PA313A HOUSING (ITEM 2) AS SHOWN, ENSURING CORRECT WIRE TO PIN MATING.
- USING WHITE INDELIBLE INK OR PAINT, PUT A DOT ON P/N PA308 HOUSING, LOCATED AS SHOWN, TO INDICATE PIN ONE.
- ROUTE TO INSPECTION.
- USING BLACK INDELIBLE INK, PRINT CABLE DESTINATION ON P/N L057 LABEL (ITEM 14) AND ATTACH TO EACH END OF CABLE. CABLE DESTINATION IS INDICATED AT END OF EACH CABLE.
- ROUTE TO INSPECTION.

A	RELEASED, ECN #5603		
REV.	DESCRIPTION	BY	DATE
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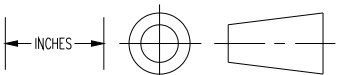
14	L057	3	LABEL, SELF LAMINATING
13	W032	76.50	22 GAGE, 19 X 34 WHT UL-1429
12	W012	76.50	22 GAGE, 19 X 34 YEL UL-1429
11	W011	76.50	22 GAGE, 19 X 34 GRN UL-1429
10	W010	76.50	22 GAGE, 19 X 34 BLU UL-1429
9	W009	76.50	22 GAGE, 19 X 34 RED UL-1429
8	W008	76.50	22 GAGE, 19 X 34 VIO UL-1429
7	W007	38.25	22 GAGE, 19 X 34 BRN UL-1429
6	W006	38.25	22 GAGE, 19 X 34 ORN UL-1429
5	W005	153.00	22 GAGE, 19 X 34 BLK UL-1429
4	PT49	18	CONTACT, CRIMP SOCKET, 26-22 AWG
3	PT07	18	CNTCT, LKG. CLP, 26-22 AWG, REEL
2	PA313A	2	CONN, 11P, SR. HSG, .079 CTRS.
1	PA308	1	CONN, 20P, DR. HSG, ST, .100 CTRS.
ITEM / REF. DES.		PART NO.	QTY.
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE		DRAWN	SR 27FEB97
.XX = ± .25		DESIGNED	CN 3FEB97
.XXX = ± .015		CHECKED	
ANGLES = ± —		APPROVED	
DESCRIPTION			
 Invivo Research Inc. <i>PRECISION BIOMEDICAL INSTRUMENTS</i> <i>Subsidiary of Invivo Corporation</i> 12601 RESEARCH PARKWAY., ORLANDO, FL 32826			
TITLE: ASSEMBLY: AC344 CAB, LCD DRIVE (BASE), 3150			
CAD SCALE:	SHEET:	DWG. NO.:	REV.:
1 : 1	1 OF 1	C59C335	A



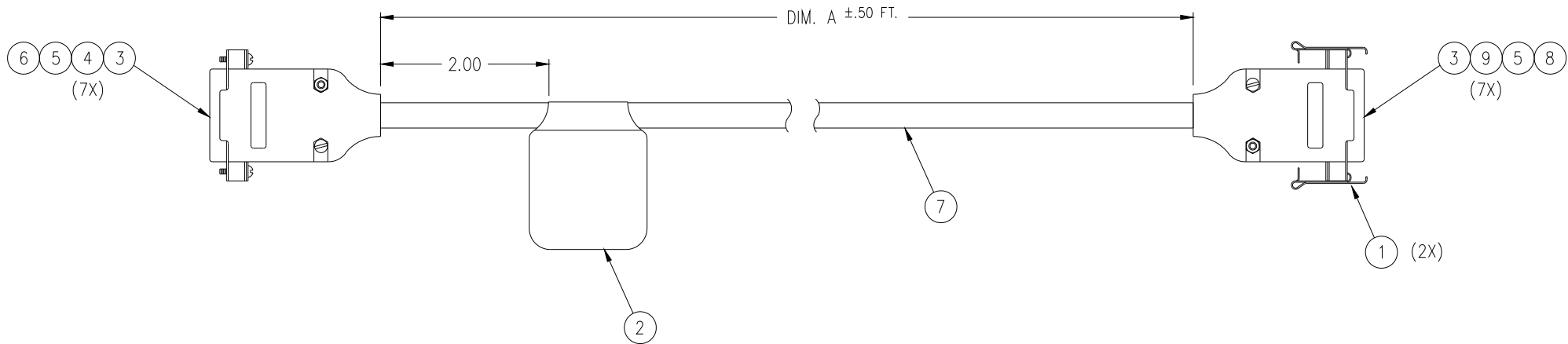
NOTES:

- CUT SINGLE WIRES (ITEMS 5 & 6) TO 10.62 LENGTH.
- CUT SINGLE WIRES (ITEMS 5, 10 & 13), TWO WIRES (ITEM 6), AND THREE WIRES (ITEMS 7, 8, 9, 11 & 12) TO 10.25 LENGTH.
- STRIP ALL WIRES .093 ON ONE END AND .156 ON THE OTHER END.
- CRIMP P/N PA77 CONTACT (ITEM 1) ON THE .093 STRIPPED END OF EACH WIRE.
- CRIMP P/N PT49 CONTACT (ITEM 4) ON THE .156 STRIPPED END OF EACH WIRE.
- ROUTE TO INSPECTION.
- INSERT CONTACTS INTO P/N PA223 CONNECTOR (ITEM 2) AS SHOWN, ENSURING CORRECT WIRE TO PIN MATING.
- TWIST WIRES 1-2 TURNS PER INCH.
- TWIST RED AND BROWN WIRES 4 TURNS PER INCH.
- INSERT CONTACTS INTO P/N PA313A HOUSING (ITEM 3) AS SHOWN, ENSURING CORRECT WIRE TO PIN MATING.
- ROUTE TO INSPECTION.
- USING BLACK INDELIBLE INK, PRINT CABLE DESTINATION ON P/N L057 LABEL (ITEM 14) AND ATTACH TO EACH END OF CABLE. CABLE DESTINATION IS INDICATED AT END OF EACH CABLE.
- USING INDELIBLE INK OF CONTRASTING COLOR, PRINT ASSEMBLY NUMBER, REVISION, LOT NUMBER, AND ASSEMBLER INITIALS. USE BOTH SIDES OF CONNECTOR IF NEEDED
- ROUTE TO INSPECTION.

B	PER ECN #6351	CHY	30JAN98
A	RELEASED, ECN #5603	SR	27OCT97
REV.	DESCRIPTION	BY	DATE
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14	L057	3	LABEL, SELF LAMINATING		
13	W010	10.25	22 GAGE, 19 X 34 BLUE UL-1429		
12	W008	30.75	22 GAGE, 19 X 34 VIOLET UL-1429		
11	W005	30.75	22 GAGE, 19 X 34 BLACK UL-1429		
10	W011	10.25	22 GAGE, 19 X 34 GREEN UL-1429		
9	W009	30.75	22 GAGE, 19 X 34 RED UL-1429		
8	W012	30.75	22 GAGE, 19 X 34 YELLOW UL-1429		
7	W006	30.75	22 GAGE, 19 X 34 ORANGE UL-1429		
6	W007	30.75	22 GAGE, 19 X 34 BROWN UL-1429		
5	W032	20.50	22 GAGE, 19 X 34 WHITE UL-1429		
4	PT49	22	CONTACT, CRIMP SOCKET, 26-22 AWG		
3	PA313A	2	CONN, 11P, SR. HSG, .079 CTRS.		
2	PA223	1	CONN, DB25 MALE W/GND INDENTS		
1	PA77	22	CONTACT, PIN, CRIMP, 24-20 AWG		
ITEM / REF. DES.		PART NO.	QTY.		
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE .XX = ± .03 .XXX = ± .015 ANGLES = ± —		DRAWN	SR 21MAR97		
		DESIGNED	CN 3FEB97		
		CHECKED			
		APPROVED			
 THIRD ANGLE PROJECTION		 Invivo Research Inc. <i>PRECISION BIOMEDICAL INSTRUMENTS</i> <i>Subsidiary of Invivo Corporation</i> 12601 RESEARCH PARKWAY., ORLANDO, FL 32826			
				TITLE: ASSEMBLY: AC345 CAB, ECG/PRES. FILTER BOX (TOP), 3150	
				CAD SCALE: 1 : 1	SHEET: 1 OF 1
DO NOT SCALE THIS DRAWING !!!					

16	L057	5	LABEL, SELF LAMINATING
15	W032	66.50	22 GAGE, 19 X 34 WHT UL-1429
14	W012	96.75	22 GAGE, 19 X 34 YEL UL-1429
13	W011	30.25	22 GAGE, 19 X 34 GRN UL-1429
12	W010	30.25	22 GAGE, 19 X 34 BLU UL-1429
11	W009	96.75	22 GAGE, 19 X 34 RED UL-1429
10	W008	96.75	22 GAGE, 19 X 34 VIO UL-1429
9	W007	96.75	22 GAGE, 19 X 34 BRN UL-1429
8	W006	96.75	22 GAGE, 19 X 34 ORN UL-1429
7	W005	96.75	22 GAGE, 19 X 34 BLK UL-1429
6	PT49	22	CONTACT, CRIMP SOCKET, 26-22 AWG
5	PT28	22	CONTACT, CRIMP SOCKET, 22-28 AWG
4	PA313A	2	CONN, 11P, SR. HSG, .079 CTRS.
3	PA234	1	CONN, 11 PIN, SR. HSG, ST, .098 CTRS.
2	PA193	1	CONN, 6P, SR, HSG, ST, .098 CTRS.
1	PA176	1	HOUSING, KEYED, SR, 9 PIN, .10
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE	DRAWN	SR	 Invivo Research Inc. PRECISION BIOMEDICAL INSTRUMENTS Subsidiary of Invivo Corporation
.XX = ± .25	DESIGNED	CN	
.XXX = ± .015	CHECKED		
ANGLES = ± —	APPROVED		
 THIRD ANGLE PROJECTION			TITLE: ASSEMBLY: AC346 CAB, ECG/PRES. NON-ISO (BASE), 3150
DO NOT SCALE THIS DRAWING !!!			CAD SCALE: 1 : 1 SHEET: 1 OF 1 DWG. NO.: C59C337 REV.: B



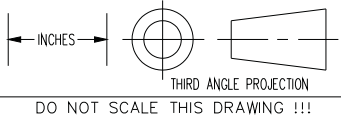
PIN TO WIRE COLOR CHART		
PIN	COLOR	FUNCTION
1	WHITE	TX
2	GRAY	RX
7	ORANGE	POWER
8	RED	POWER
9	BLACK	GROUND
10	VIOLET	GROUND
11	BLUE	GROUND

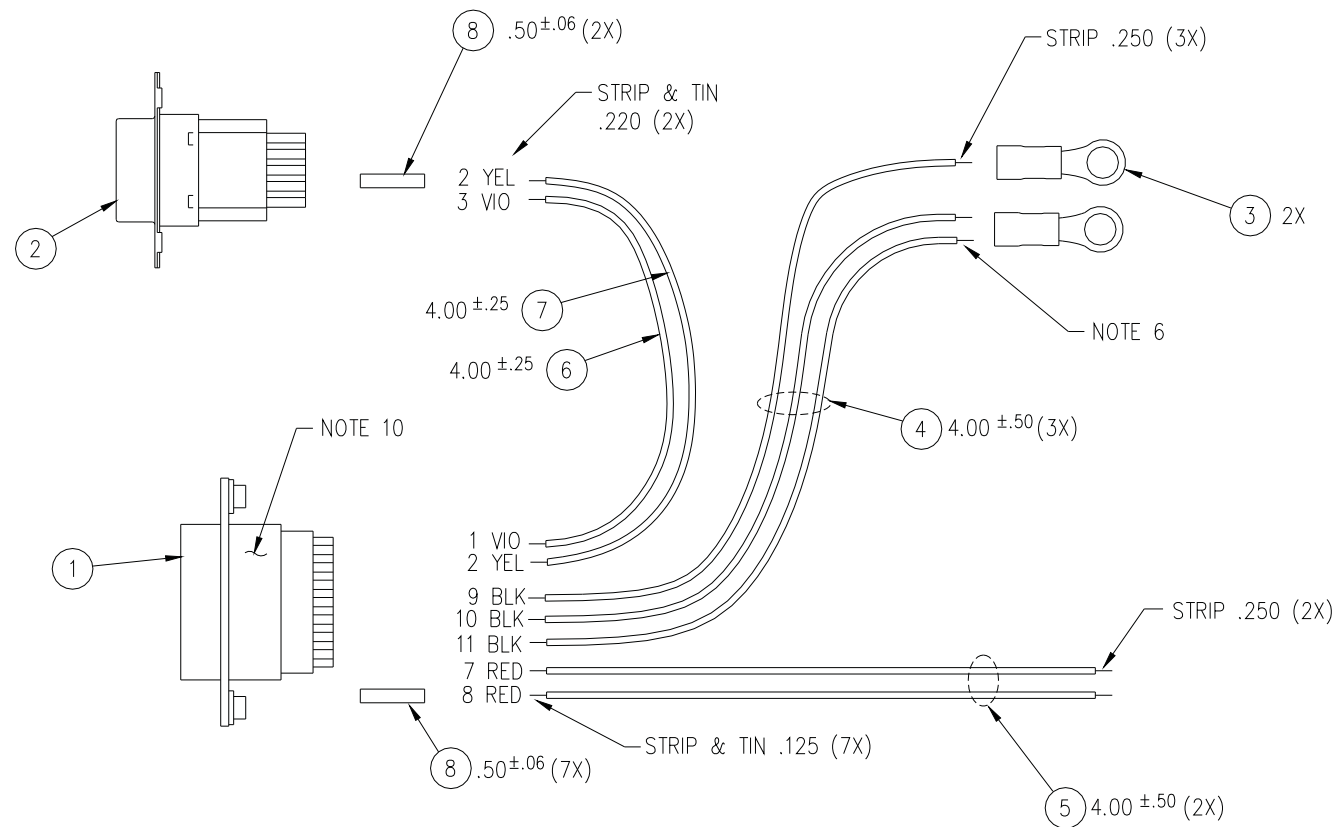
CABLE LENGTH CHART		
ASSY. P/N	DIM. A	TAG P/N
AC348	25.00 FT.	L167
AC348A	5.00 FT.	L167A

REF. ASSEMBLY INSTRUCTION AI055

E	PER ECN #7627	CHY	17FEB00
D	PER ECN #6811	CHY	9NOV98
C	PER ECN #6397M	CHY	20FEB98
B	PER ECN #6293	SR	14JAN98
A	RELEASED PER ECN #6080	JRB	29SEP97
REV.	DESCRIPTION	BY	DATE
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9	PT29	7	SOCKET, MACHINED, (.04), 24-20 AWG
8	PA358A	1	CONN, DB15, RCPT, SNAP-IN
7	W052	SEE CHART	CABLE, 22 GAGE, 10 CONDUCTOR, MRI
6	PA141	1	PLUG, MALE, DB15
5	PA140	2	BACKSHELL, CONNECTOR 15PIN
4	PA77	7	CONTACT, PIN, CRIMP, 24-20 AWG
3	M092	A/R	TAPE, SHIELDING, COPPER 1" WIDE
2	SEE CHART	1	CABLE TAG, POWER ADAPTER CABLE, 3150
1	H080	2	SPRING LATCH, "D" CONNECTOR
DESCRIPTION			
Invivo Research Inc. <i>PRECISION BIOMEDICAL INSTRUMENTS</i> <i>Subsidiary of Invivo Corporation</i> 12601 RESEARCH PARKWAY., ORLANDO, FL 32826 TITLE: ASSEMBLY: AC348 & AC348A CAB, POWER ADAPTER, 3150			
CAD SCALE:	SHEET:	DWG. NO.:	REV.:
NONE	1 OF 1	C59C339	E



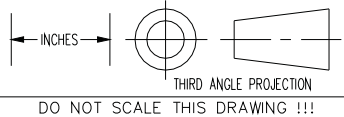


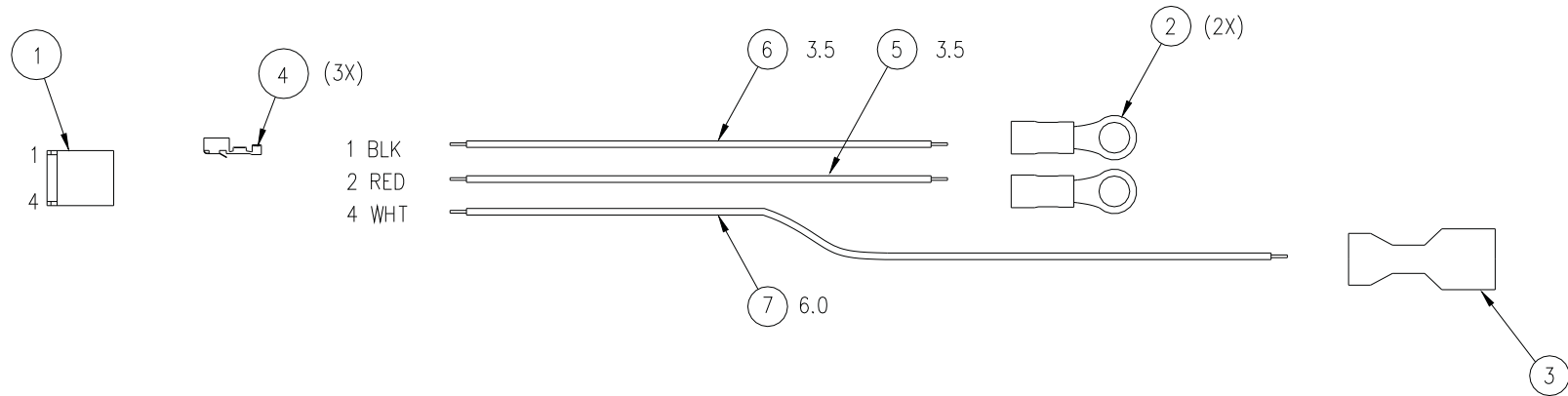
NOTES

1. CUT THREE P/N W005 BLACK WIRES AND TWO P/N W009 RED WIRES (ITEMS 4 & 5) TO 4.00.
2. CUT ONE EACH P/N W008 VIOLET WIRE AND P/N W012 YELLOW WIRE (ITEMS 6 & 7) TO 4.00.
3. STRIP AND TIN ALL WIRES AS NOTED.
4. PLACE .50 LENGTHS OF P/N WT04 HEAT SHRINK ONTO WIRES AS SHOWN. NOTE TWO PIECES ON YELLOW AND VIOLET WIRES. DO NOT SHRINK.
5. SOLDER TINNED END OF WIRES TO PIN NUMBERS SHOWN FOR P/N PA141A CONNECTOR (ITEM 1) AND FOR P/N PA370 CONNECTOR (ITEM 2).
6. TWIST TOGETHER THE UNTINNED ENDS OF BLACK WIRES INDICATED AND CRIMP P/N PT16 RING TERMINAL (ITEM 3) ONTO THE PAIR AS SHOWN.
7. CRIMP P/N PT16 RING TERMINAL ONTO UNTINNED END OF REMAINING BLACK WIRE.
8. ROUTE TO INSPECTION.
9. PLACE PREVIOUSLY APPLIED HEAT SHRINK OVER ALL CONNECTOR SOLDER CUPS AND SHRINK IN PLACE.
10. PRINT ASSEMBLY NUMBER, REVISION, LOT NUMBER, AND ASSEMBLER INITIALS ON UNPRINTED SIDE OF PA141A CONNECTOR IN AREA SHOWN.
11. ROUTE TO INSPECTION.

B	PER ECN #7663	CHY	25JUL00
A	PER ECN #6080	JRB	29SEP97
REV.	DESCRIPTION	BY	DATE
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8	WT04	4.50	HEAT SHRINK, 3/32 ID BLACK
7	W012	4.00	22 GAGE 19 X 34 YELLOW UL-1429
6	W008	4.00	22 GAGE 19 X 34 VIOLET UL-1429
5	W009	8.00	22 GAGE 19 X 34 RED UL-1429
4	W005	12.00	22 GAGE 19 X 34 BLACK UL-1429
3	PT16	2	TERM, RING TONGUE, #10, 22-16 GA
2	PA370	1	CONN, DB9 RECPT, SOLDRCP, 3000-8000 PF
1	PA141A	1	CONN, FILTR, DB15F, SOLDRCP, 2500PF
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE	DRAWN	JRB	60CT97
.XX = ± .25	DESIGNED	JRB	60CT97
.XXX = ± .015	CHECKED		
ANGLES = ± —	APPROVED		
 Invivo Research Inc. <i>PRECISION BIOMEDICAL INSTRUMENTS</i> <i>Subsidiary of Invivo Corporation</i> 12601 RESEARCH PARKWAY, ORLANDO, FL 32826			
TITLE ASSEMBLY: AC349 CAB, POWER-I/O, 3150			
CAD SCALE	SHEET	DWG. NO.	REV.
NONE	1 OF 1	C59C340	B





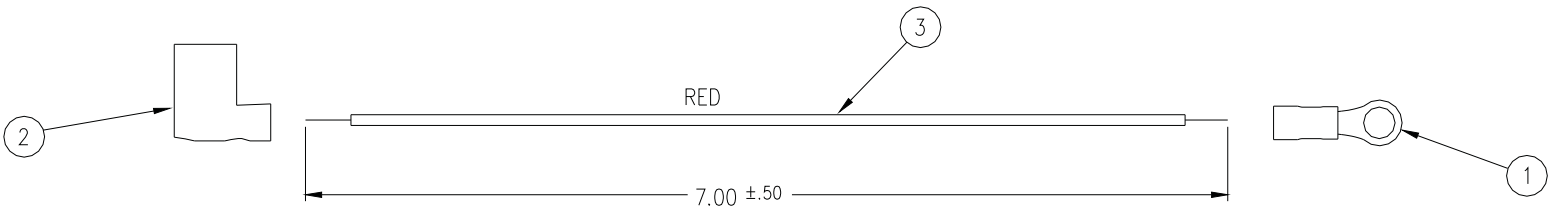
NOTES:

1. CUT P/N W009, W005, AND W032 WIRES (ITEMS 5, 6, 7) TO LENGTH SHOWN.
2. STRIP ONE END OF EACH WIRE .125. STRIP THE OTHER END .250.
3. CRIMP P/N PT36 CONTACT (ITEM 4) ON THE .125 STRIPPED END OF EACH OF THE WIRES.
4. CRIMP P/N PT16 TERMINALS (ITEM 2) ON THE RED AND BLACK WIRES (ITEMS 5 & 6).
5. CRIMP P/N PT05 TERMINAL (ITEM 3) ON THE WHITE WIRE (ITEM 7).
6. ROUTE TO INSPECTION.
7. INSERT PT36-CRIMPED CONTACTS INTO P/N PA344A CONNECTOR (ITEM 1), ENSURING CORRECT WIRE-TO-PIN MATING.
8. ROUTE TO INSPECTION.

C	PER ECN #6566	KCO	12MAY98
B	PER ECN #6432	JRB	23MAR98
A	RELEASED, ECN #6080	JRB	29SEP97
REV.	DESCRIPTION	BY	DATE

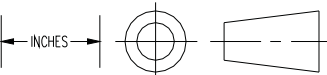
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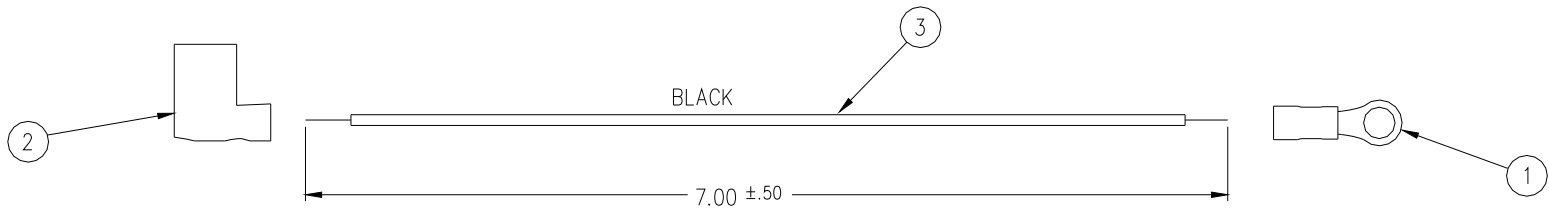
7	W032	6.0	22 GAGE 19X 34 WHITE UL-1429
6	W005	3.5	22 GAGE 19 X 34 BLACK UL-1429
5	W009	3.5	22 GAGE 19 X 34 RED UL-1429
4	PT36	3	CONTACT, CRIMP SOCKET, 22-26 AWG
3	PT05	1	FAST-ON 22-18 AWG
2	PT16	2	TERMINAL, RING TONGUE, #10, 22-16 GA.
1	PA344A	1	CONN, 4P, SR. HSG, LCKG, .100 CTRS.
ITEM / REF. DES.		PART NO.	QTY.
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE		DRAWN	JRB 60CT97
.XX = ± .25		DESIGNED	JRB 60CT97
.XXX = ± —		CHECKED	
ANGLES = ± —		APPROVED	
DESCRIPTION			
 Invivo Research Inc. <i>PRECISION BIOMEDICAL INSTRUMENTS</i> <i>Subsidiary of Invivo Corporation</i> 12601 RESEARCH PARKWAY, ORLANDO, FL 32826			
TITLE ASSEMBLY: AC350 CAB, POWER ADAPTER LED, 3150			
CAD SCALE	SHEET	DWG. NO.	REV.
NONE	1 OF 1	C59C341	C



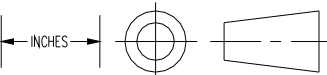
NOTES:

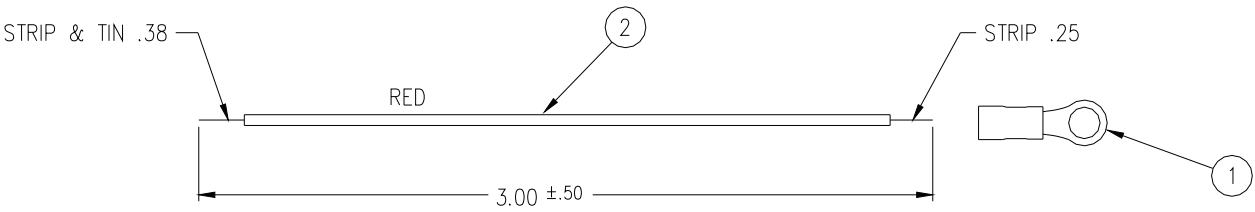
- 1. CUT P/N W022 RED WIRE (ITEM 3) TO LENGTH SHOWN.
- 2. STRIP .31 AND CRIMP P/N PT19 TERMINAL (ITEM 2) ON ONE END OF WIRE.
- 3. STRIP .25 AND CRIMP P/N PT16 TERMINAL (ITEM 1) ON OTHER END OF WIRE.
- 4. ROUTE TO INSPECTION.

				3	W022	7.00	18 GAGE, 19 X 30, RED, UL-1430	
				2	PT19	1	TERM, RECPT, FLAG, FASTON, 22-18 GA.	
				1	PT16	1	TERMINAL, RING TONGUE, #10, 22-16 GA.	
				ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION	
				UNLESS OTHERWISE SPECIFIED TOLERANCES ARE	DRAWN	JRB 60CT97	 Invivo Research Inc. <i>PRECISION BIOMEDICAL INSTRUMENTS</i> <i>Subsidiary of Invivo Corporation</i> 12601 RESEARCH PARKWAY, ORLANDO, FL 32826	
				.XX = ± .25	DESIGNED	JRB 60CT97		
				.XXX = ± ____	CHECKED			
				ANGLES = ± ____	APPROVED			
A	RELEASED, ECN #6080	JRB	29SEP97					
REV.	DESCRIPTION	BY	DATE					
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				THIRD ANGLE PROJECTION				
				DO NOT SCALE THIS DRAWING !!!				
				TITLE				
				ASSEMBLY: AC351 CAB, POS. D/C VOLTAGE, 3150				
CAD SCALE		SHEET	DWG. NO.	REV.				
NONE		1 OF 1	C59C342	A				

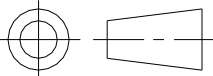


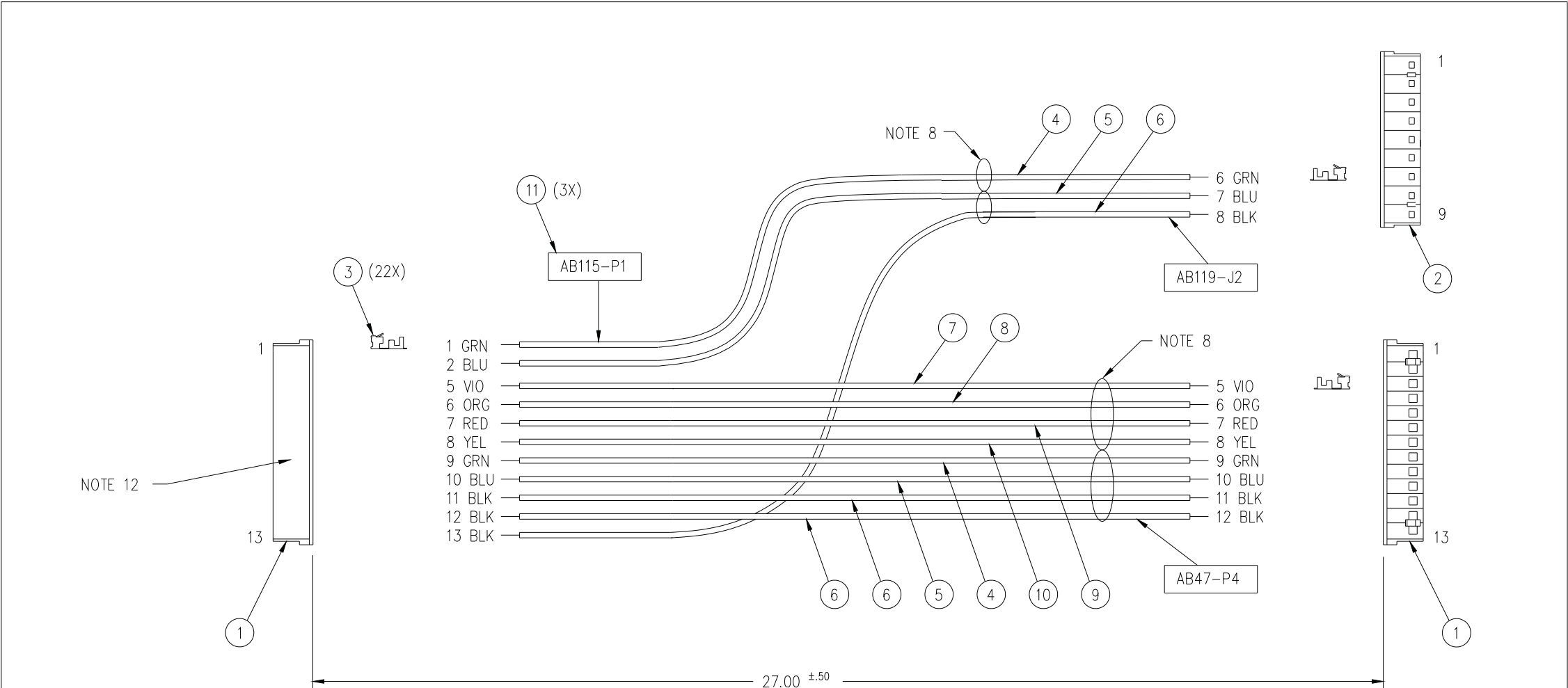
- NOTES:
- 1. CUT P/N W017 BLACK WIRE (ITEM 3) TO LENGTH SHOWN.
 - 2. STRIP .31 AND CRIMP P/N PT19 TERMINAL (ITEM 2) ON ONE END OF WIRE.
 - 3. STRIP .25 AND CRIMP P/N PT16 TERMINAL (ITEM 1) ON OTHER END OF WIRE.
 - 4. ROUTE TO INSPECTION.

				3	W017	7.00	18 GAGE, 19 X 30, BLACK, UL-1430
				2	PT19	1	TERM, RECPT, FLAG, FASTON, 22-18 GA.
				1	PT16	1	TERMINAL, RING TONGUE, #10, 22-16 GA.
				ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
				UNLESS OTHERWISE SPECIFIED TOLERANCES ARE	DRAWN	JRB 60CT97	 Invivo Research Inc. <i>PRECISION BIOMEDICAL INSTRUMENTS</i> <i>Subsidiary of Invivo Corporation</i> 12601 RESEARCH PARKWAY, ORLANDO, FL 32826
				.XX = ± .25	DESIGNED	JRB 60CT97	
				.XXX = ± ____	CHECKED		
				ANGLES = ± ____	APPROVED		
A	RELEASED, ECN #6080	JRB	29SEP97				
REV.	DESCRIPTION	BY	DATE				
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				TITLE ASSEMBLY: AC352 CAB, NEG. D/C VOLTAGE, 3150			
				CAD SCALE	SHEET	DWG. NO.	REV.
				NONE	1 OF 1	C59C343	A



- NOTES:
- 1. CUT P/N W022 RED WIRE (ITEM 2) TO LENGTH SHOWN.
 - 2. STRIP BOTH ENDS AS NOTED
 - 3. CRIMP P/N PT16 TERMINAL (ITEM 1) ON .25 STRIPPED END OF WIRE.
 - 4. ROUTE TO INSPECTION.

				2	W022	3.00	18 GAGE, 19 X 30, RED, UL-1430
				1	PT16	1	TERMINAL, RING TONGUE, #10, 22-16 GA.
				ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
				UNLESS OTHERWISE SPECIFIED TOLERANCES ARE .XX = ± .25 .XXX = ± — ANGLES = ± —	DRAWN	JRB	60CT97
					DESIGNED	JRB	60CT97
					CHECKED		
					APPROVED		
B	PER ECN #6335	CHY	29JAN98	 Invivo Research Inc. <i>PRECISION BIOMEDICAL INSTRUMENTS</i> <i>Subsidiary of Invivo Corporation</i> 12601 RESEARCH PARKWAY, ORLANDO, FL 32826			
A	RELEASED, ECN #6080	JRB	29SEP97				
REV.	DESCRIPTION	BY	DATE	TITLE ASSEMBLY: AC354 CAB, DIODE POWER, 3150			
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				DO NOT SCALE THIS DRAWING !!!		DWG. NO. C59C344	REV. B



NOTES:

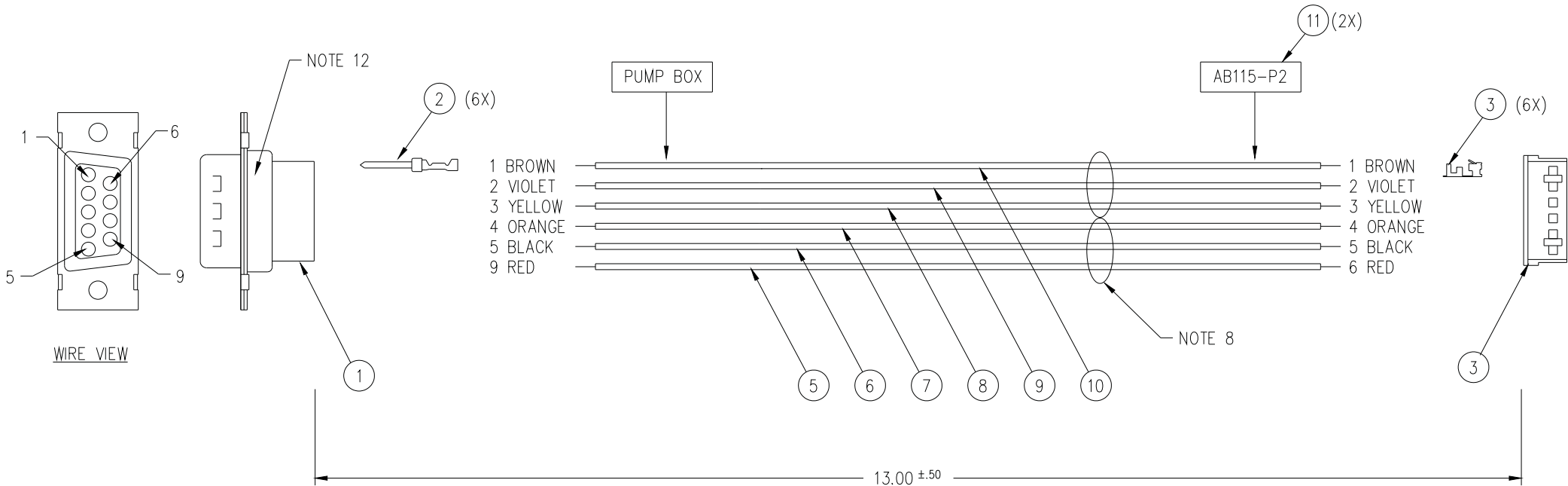
- CUT SINGLE WIRES (ITEM 7, 8, 9, & 10) TO 27.20 LENGTH.
- CUT TWO WIRES (ITEMS 4 & 5) TO 27.20 LENGTH.
- CUT THREE WIRES (ITEM 6) TO 27.20 LENGTH.
- STRIP THE ENDS OF ALL WIRES .100
- CRIMP P/N PT28 CONTACTS ON ALL WIRE ENDS.
- ROUTE TO INSPECTION.
- INSERT CONTACTS INTO P/N PA233 CONNECTOR (ITEM 1 ON LEFT) AS SHOWN, ENSURING CORRECT WIRE-TO-PIN MATING.
- TWIST WIRES 1-2 TURNS PER INCH, IN SEPARATE GROUPS.
- INSERT REMAINING CONTACTS INTO P/N PA176 CONNECTOR (ITEM 2) AND AND P/N PA233 CONNECTOR (ITEM 1 ON RIGHT SIDE), ENSURING CORRECT WIRE TO PIN MATING.
- ROUTE TO INSPECTION.
- USING BLACK INDELIBLE INK, PRINT REFERENCE DESIGNATOR OF MATING CONNECTOR ON P/N L057 LABEL (ITEM 11) AND ATTACH TO EACH END OF CABLE AS SHOWN.
- PRINT ASSEMBLY NUMBER, REVISION, AND ASSEMBLER INITIALS ON CONNECTOR.
- ROUTE TO INSPECTION.

C	PER ECN #6859	JWT	27OCT98
B	PER ECN #6560M	SR	24APR98
A	RELEASED, ECN #6424	JRB	5MAR98
REV.	DESCRIPTION	BY	DATE

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11	L057	3	LABEL, SELF LAMINATING
10	W037	27.2	26 GAGE 19 X 38 YELLOW UL-1429
9	W038	27.2	26 GAGE 19 X 38 RED UL-1429
8	W036	27.2	26 GAGE 19 X 38 ORANGE UL-1429
7	W048	27.2	26 GAGE 19 X 38 VIOLET UL-1429
6	W047	81.6	26 GAGE 19 X 38 BLACK UL-1429
5	W049	54.4	26 GAGE 19 X 38 BLUE UL-1429
4	W039	54.4	26 GAGE 19 X 38 GREEN UL-1429
3	PT28	22	CONTACT, CRIMP SOCKET, 22-28 AWG
2	PA176	1	HOUSING, KEYED, SR, 9 PIN, .10
1	PA233	2	CONN, 13P, SR, HSG, ST, .098 CTRS.

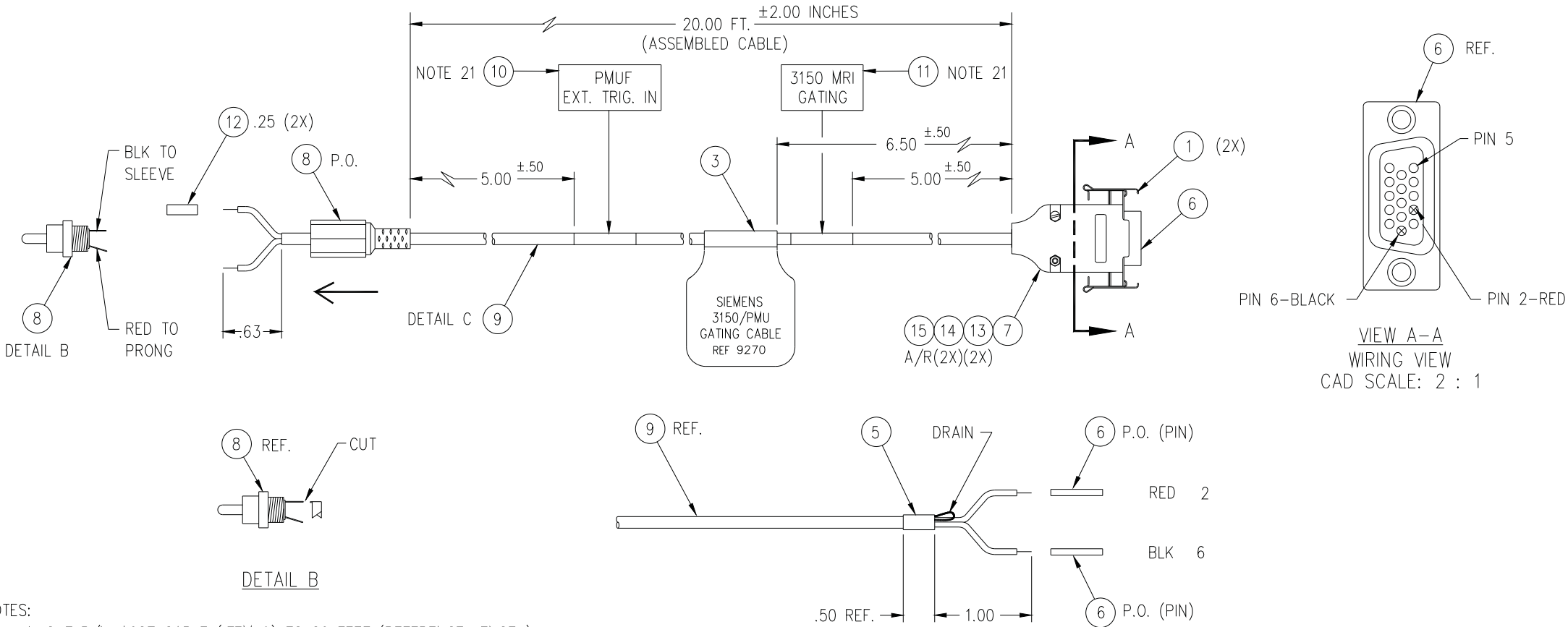
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE .XX = ± .03 .XXX = ± .015 ANGLES = ± —	DRAWN JRB DESIGNED DM CHECKED APPROVED	5MAR98 24FEB98	 Invivo Research Inc. <i>PRECISION BIOMEDICAL INSTRUMENTS</i> <i>Subsidiary of Invivo Corporation</i> 12601 RESEARCH PARKWAY, ORLANDO, FL 32826
TITLE: ASSEMBLY: AC358 CABLE, DSP, C02 INTRCNT, 3150			
CAD SCALE: 2 : 1	SHEET: 1 OF 1	DWG. NO.: C59C348	REV.: C



- CUT SINGLE WIRES (ITEM 5,6,7,8,9 & 10) TO 13.250 LENGTH.
- STRIP ONE END OF EACH WIRE .093
- STRIP OPPOSITE END OF EACH WIRE .100
- CRIMP P/N PA77 CONTACTS (ITEM 2) ON .093 STRIPPED END.
- CRIMP P/N PT28 CONTACTS (ITEM 4) ON .100 STRIPPED END
- ROUTE TO INSPECTION.
- INSERT PA77 CONTACTS INTO P/N PA222 CONNECTOR (ITEM 1) ENSURING CORRECT WIRE-TO-PIN MATING.
- TWIST WIRES 1-2 TURNS PER INCH.
- INSERT P/N PT28 CONTACTS INTO P/N PA193 CONNECTOR (ITEM 3) ENSURING CORRECT WIRE TO PIN MATING.
- ROUTE TO INSPECTION.
- USING BLACK INDELIBLE INK, PRINT REFERENCE DESIGNATOR OF MATING CONNECTOR ON P/N L057 LABEL (ITEM 11) AND ATTACH TO EACH END OF CABLE AS SHOWN.
- PRINT ASSEMBLY NUMBER, REVISION, AND ASSEMBLER INITIALS ON CONNECTOR.
- ROUTE TO INSPECTION.

A	RELEASED, ECN #6424	JRB	5MAR98
REV.	DESCRIPTION	BY	DATE
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11	L057	2	LABEL, SELF LAMINATING
10	W007	13.25	22 GAGE 19 X 34 BROWN UL-1429
9	W008	13.25	22 GAGE 19 X 34 VIOLET UL-1429
8	W012	13.25	22 GAGE 19 X 34 YELLOW UL-1429
7	W006	13.25	22 GAGE 19 X 34 ORANGE UL-1429
6	W005	13.25	22 GAGE 19 X 34 BLACK UL-1429
5	W009	13.25	22 GAGE 19 X 34 RED UL-1429
4	PT28	6	CONTACT, CRIMP SOCKET, 22-28 AWG
3	PA193	1	CONN, 6P, SR HSG, ST, .098 CTRS
2	PA77	6	CONTACT, PIN, CRIMP, 24-20 AWG
1	PA222	1	CONN, DB9 MALE, W/GND INDENTS
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE	DRAWN	JRB	5MAR98
.XX = ± .03	DESIGNED	DM	24FEB98
.XXX = ± .015	CHECKED		
ANGLES = ± —	APPROVED		
Invivo Research Inc. PRECISION BIOMEDICAL INSTRUMENTS Subsidiary of Invivo Corporation 12601 RESEARCH PARKWAY, ORLANDO, FL 32826			
TITLE: ASSEMBLY: AC359 CABLE, PNEUM. ASSY TO C02 BOARD, 3150			
CAD SCALE:	SHEET:	DWG. NO.:	REV.:
2 : 1	1 OF 1	C59C349	A



NOTES:

1. CUT P/N W027 CABLE (ITEM 9) TO 20 FEET (REFERENCE LENGTH).
2. STRIP JACKET .63 ON THE LEFT END AND 1.00 ON THE RIGHT END.
3. CUT THE DRAIN, WHITE, AND BLUE WIRES EVEN WITH JACKET ON THE .63 STRIPPED LEFT END.
4. CUT THE WHITE AND BLUE WIRES EVEN WITH JACKET ON THE RIGHT END.
5. ON THE RIGHT END, CUT DRAIN WIRE TO .50 LENGTH, FOLD BACK ONTO JACKET AND TIGHTLY WRAP P/N M092 TAPE (ITEM 5) AROUND CABLE, AS SHOWN IN DETAIL C.
6. STRIP AND TIN .187 THE WIRES ON THE RIGHT END.
7. SOLDER THE TINNED WIRES TO PINS SUPPLIED WITH P/N PA350 CONNECTOR (ITEM 6).
8. STRIP .13 THE WIRES ON THE LEFT END.
9. DISASSEMBLE P/N PA406 PLUG (ITEM 8) AND SLIP PLUG BODY OVER WIRES.
10. SLIDE .25 LONG PIECE OF P/N WT01 HEAT SHRINK (ITEM 12) OVER EACH WIRE.
11. CUT OFF END OF SLEEVE CONNECTION ON PLUG (ITEM 8) AS SHOWN IN DETAIL B.
12. J-HOOK AND SOLDER BLACK WIRE TO SLEEVE CONNECTION.
13. J-HOOK AND SOLDER RED WIRE TO PIN CONNECTION.
14. ROUTE TO INSPECTION.
15. INSERT SOLDERED PINS INTO CONNECTOR (ITEM 6), ENSURING CORRECT WIRE TO PIN MATING, AS SHOWN IN VIEW A-A.
16. APPLY THE HEAT SHRINK (ITEM 12) OVER THE SOLDER JOINTS.
17. ASSEMBLE PLUG PIN TO BODY (ITEM 8).
18. ASSEMBLE P/N PA380 METAL SHIELD (ITEM 7) AND P/N H080 SPRING LATCHES (ITEM 1) TO CONNECTOR (ITEM 6), USING P/N NS87 SCREWS (ITEM 14) AND P/N N029 NUTS (ITEM 13). APPLY P/N M050 LOCTITE (ITEM 15) AS REQUIRED.
19. TEST CABLE FOR CONTINUITY.
20. ATTACH P/N L2076 CABLE TAG (ITEM 10) AND P/N L2076A CABLE TAG (ITEM 11) TO CABLE, ENSURING CORRECT CABLE TAG PLACEMENT AT THE DIMENSION SHOWN.
21. ATTACH P/N L2074 CABLE TAG (ITEM 3) TO THE CABLE NEXT TO CABLE TAG (ITEM 11) AT THE DIMENSION SHOWN.
22. COIL CABLE, PLACE IN P/N M001D BAG (ITEM 4) AND ATTACH P/N L131 I.D. LABEL (ITEM 2) TO THE BAG.
23. ROUTE TO INSPECTION.

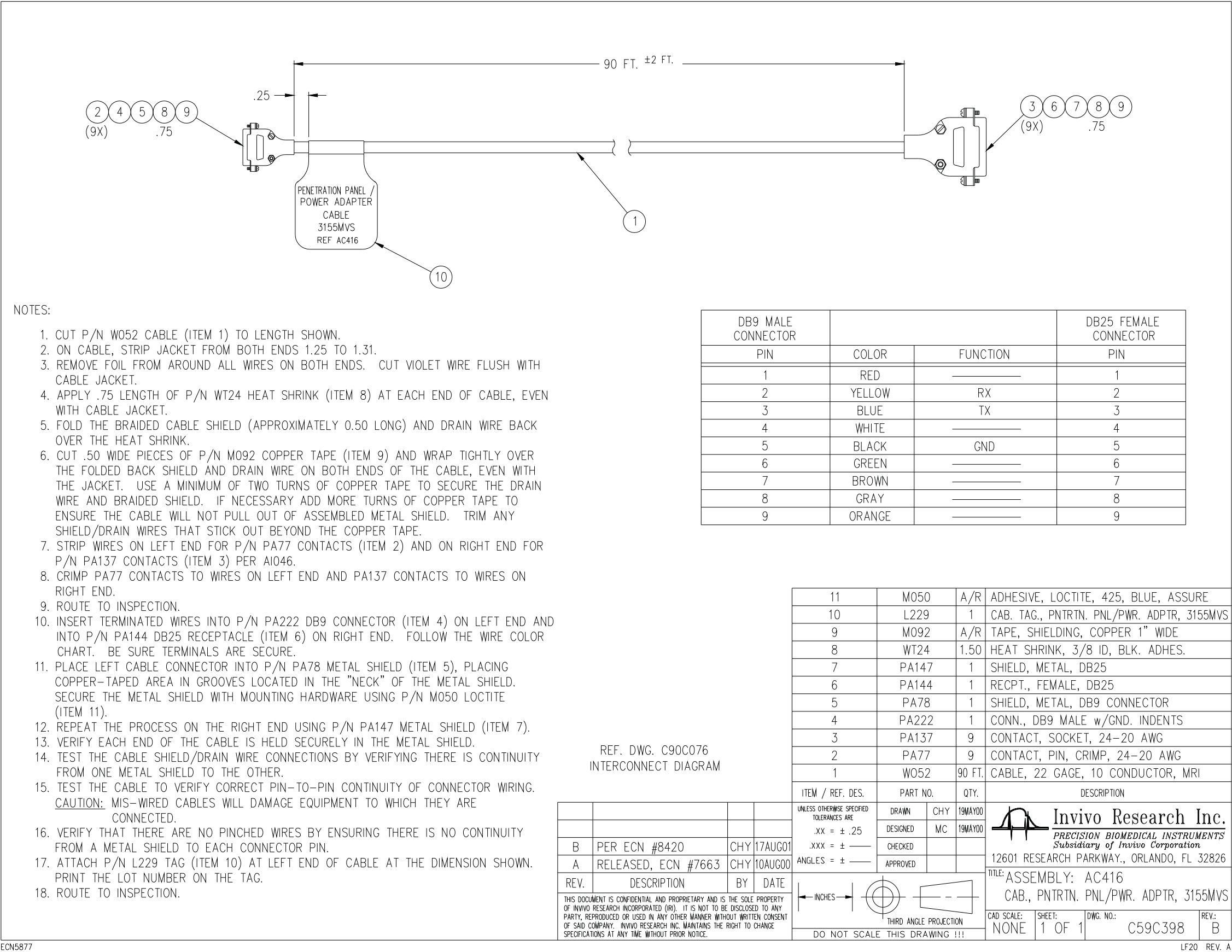
DETAIL C

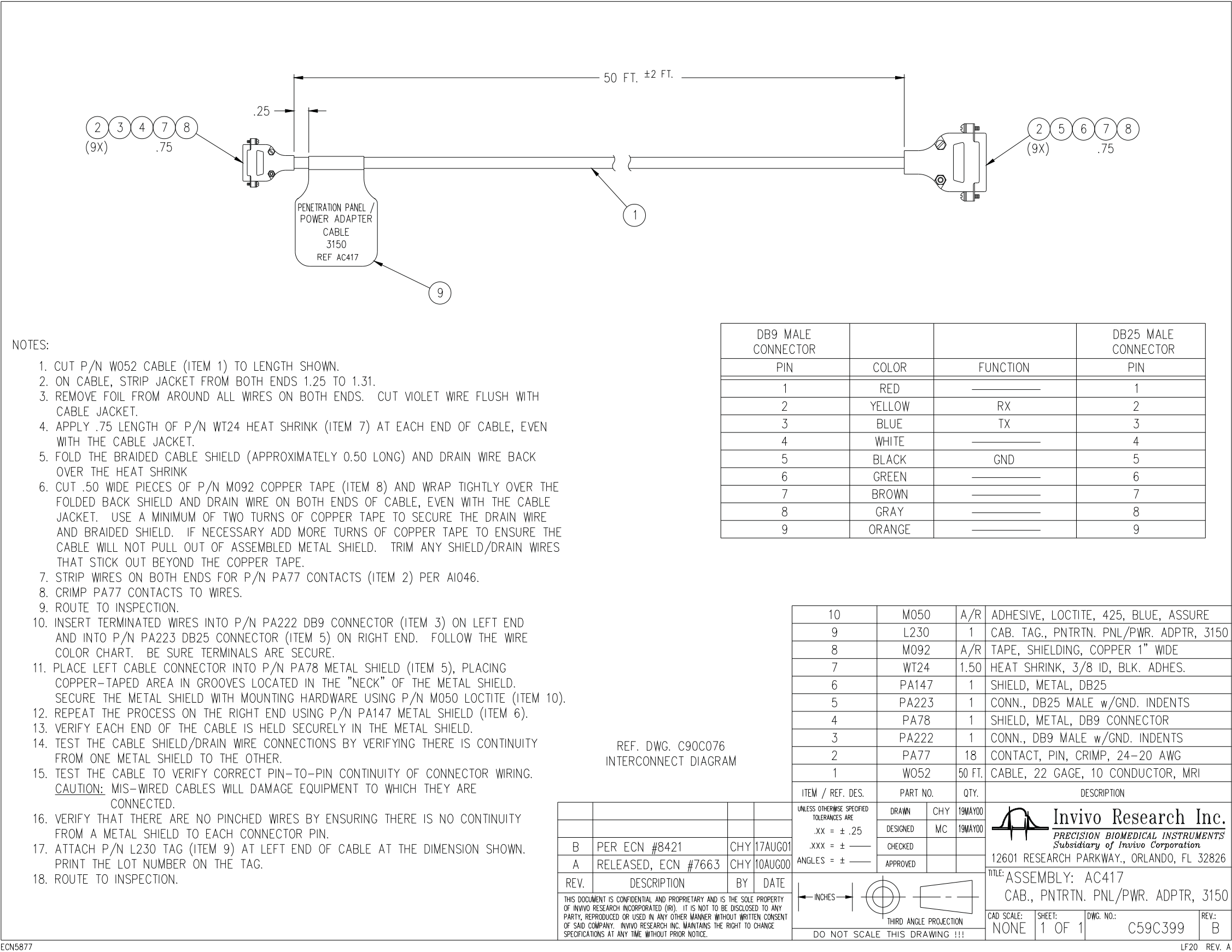
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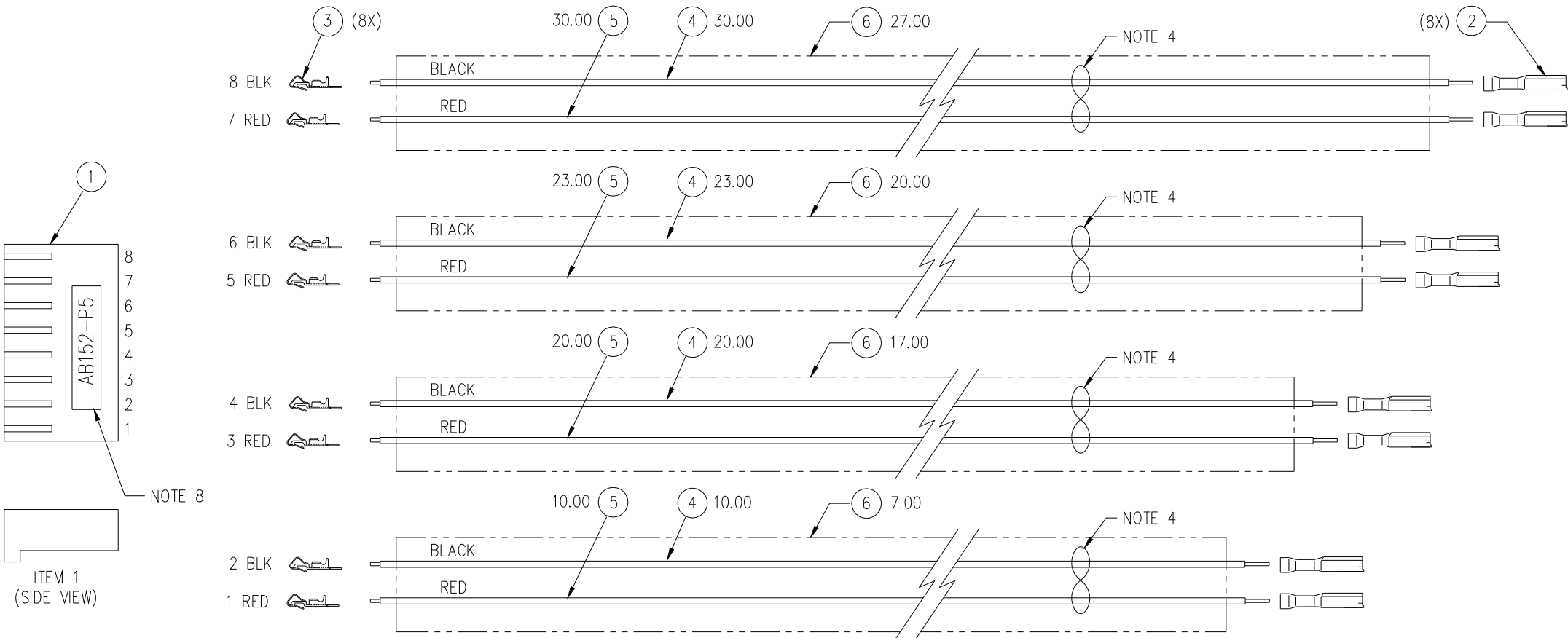
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REV.	DESCRIPTION	BY	DATE
C	PER ECN #8152	CHY	22DEC00
B	PER ECN #7867	SR	7JUL00
A	RELEASED, ECN #7195	SR	9MAR00
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15	M050	A/R	ADHESIVE, LOCTITE 425, BLUE, ASSURE
14	NS87	2	SCREW, #4-40 X 7/16 LG, FIHMS-SS, NM
13	N029	2	NUT, HEX, #4-40, SS, NM
12	WT01	.50	HEAT SHRINK, 1/8" I.D., BLACK
11	L2076A	1	CABLE TAG, CONNECTION, GATING CABLE
10	L2076	1	CABLE TAG, CONNECTION, GATING CABLE
9	W027	20 FT.	CABLE, 4 COND, 24 GA, FOIL W/DRAIN
8	PA406	1	CONNECTOR, ST RCA PHONO PLUG, RED
7	PA380	1	SHIELD, METAL, DB9, .20 CBL. O.D.
6	PA350	1	CONNECTOR, DB15, MALE, HI-DENSITY
5	M092	.50	TAPE, SHIELDING, COPPER 1" WIDE
4	M001D	1	BAG, ZIPLOCK, 10 X 13 2.0 MIL
3	L2074	1	CABLE TAG, I.D., GATING, 3150/PMU, SIEMENS
2	L131	REF.	LABEL, I.D., COMPUTER PRINTED
1	H080	2	SPRING LATCH, "D" CONN.
ITEM / REF. DES.		PART NO.	QTY.
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE		DRAWN	SR 5MAY99
.XX = ± .02		DESIGNED	JO 29APR99
.XXX = ± —		CHECKED	
ANGLES = ± —		APPROVED	
DESCRIPTION			
 Invivo Research Inc. <i>PRECISION BIOMEDICAL INSTRUMENTS</i> <i>Subsidiary of Invivo Corporation</i> 12601 RESEARCH PARKWAY., ORLANDO, FL 32826			
TITLE: ASSEMBLY: AC401 CAB, GATING, 3150/PMU, SIEMENS			
CAD SCALE:	SHEET:	DWG. NO.:	REV.:
NONE	1 OF 1	C59C385	C





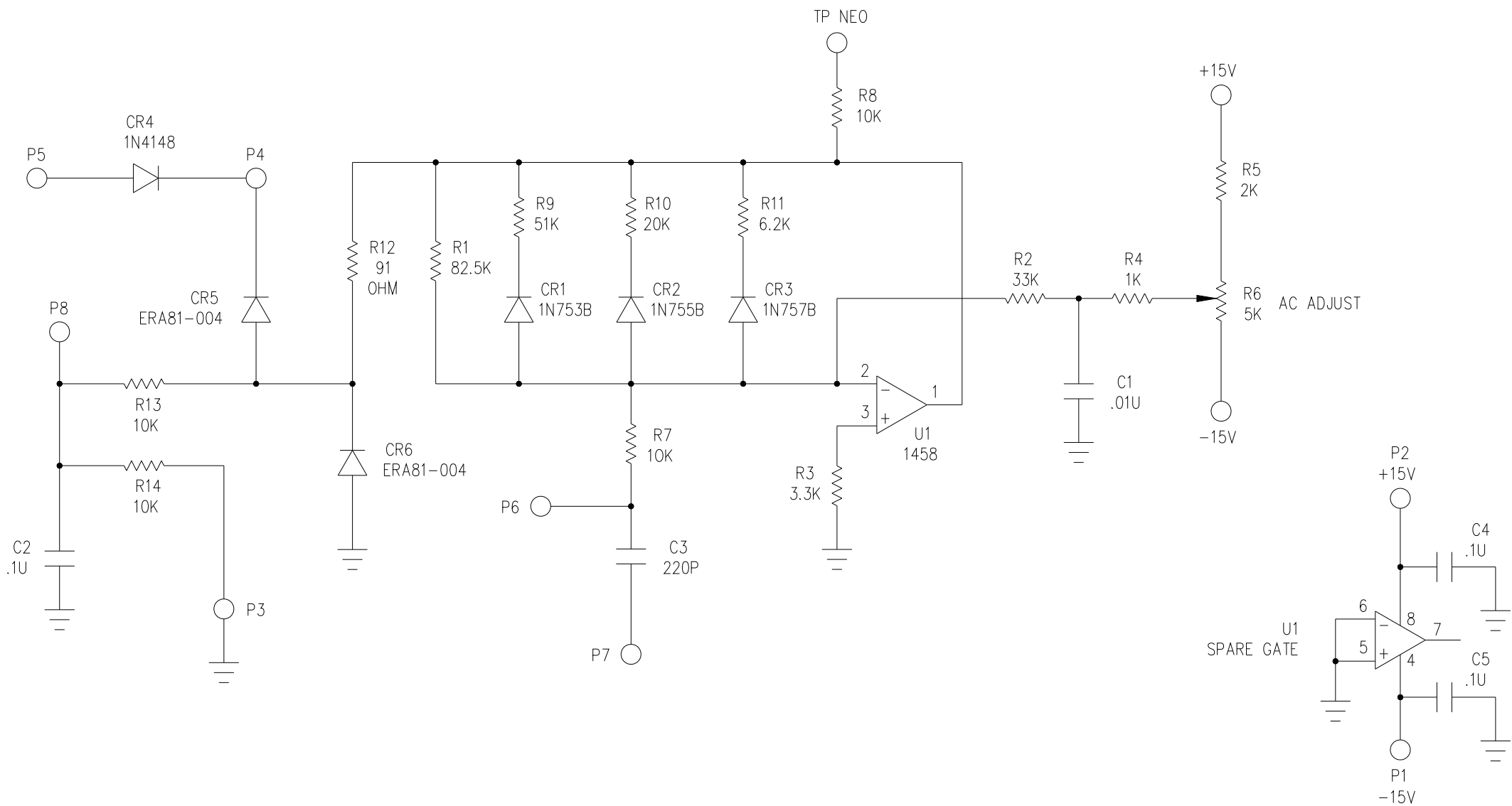


NOTES:

1. CUT WIRES (ITEM 4 & 5) TO LENGTHS AS SHOWN.
2. STRIP ONE END OF EACH WIRE FOR PT46 CONTACT (ITEM 3) AND THE OTHER END FOR PT04 TERMINAL (ITEM 2) PER AI046.
3. CRIMP P/N PT46 CONTACT (ITEM 3) ONTO APPROPRIATE WIRE END.
4. TWIST TOGETHER THE PAIRED WIRES APPROXIMATELY ONE TURN PER INCH, AND ADD P/N HI14, SLEEVING (ITEM 6).
5. CRIMP P/N PT04 TERMINAL (ITEM 2) ONTO EACH WIRE AS SHOWN.
6. ROUTE TO INSPECTION.
7. INSERT CONTACTS (ITEM 3) INTO P/N PA429A HOUSING (ITEM 1) AS SHOWN, ENSURING CORRECT WIRE TO PIN MATING.
8. USING BLACK INDELIBLE INK, PRINT REFERENCE DESIGNATOR OF MATING CONNECTOR ON PA429A HOUSING, AS SHOWN.
9. PLACE COMPLETED ASSEMBLIES IN APPROPRIATE CONTAINER WITH ASSEMBLY NUMBER, REVISION, LOT NUMBER, AND ASSEMBLER INITIALS.
10. ROUTE TO INSPECTION.

A	RELEASED, ECN #8006	SLC	09NOV01
REV.	DESCRIPTION	BY	DATE
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6	HI14	71.00	SLEEVING, CLEAR, PVC, 3/16 I.D.
5	W022	83.00	18 GAGE, 19 x 30, RED, UL-1430
4	W017	83.00	18 GAGE, 19 x 30, BLACK, UL-1430
3	PT46	8	CONTACT, CRIMP SOCKET, 18-24 AWG
2	PT04	8	TERMINAL, RECEPTACLE, 2-520193-2
1	PA429A	1	CONN, 8P, SR. HSG, LKG, .156 CTRS.
ITEM / REF. DES.		PART NO.	QTY.
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE		DRAWN	ALH 8JUN00
.XX = ± .25		DESIGNED	ALH 8JUN00
.XXX = ± .015		CHECKED	
ANGLES = ±		APPROVED	
DESCRIPTION			
 Invivo Research Inc. <i>PRECISION BIOMEDICAL INSTRUMENTS</i> <i>Subsidiary of Invivo Corporation</i> 12601 RESEARCH PARKWAY., ORLANDO, FL 32826			
TITLE: ASSEMBLY: AC418 CABLE, BATTERY/PWR. SUPPLY, 3150/M			
CAD SCALE:	SHEET:	DWG. NO.:	REV.:
1 : 1	1 OF 1	C59C400	A



LAST DESIGNATORS

R14
C5
CR6
U1
P8

REV.	DESCRIPTION	BY	DATE
C	PER ECN #7338	SR	5NOV99
B	PER ECN #3210	SR	5/92
A	PER ECN #1745M	TEW	2/22/89

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UNLESS OTHERWISE SPECIFIED TOLERANCES ARE	DRAWN	LS	3/88
.XX = ±	DESIGNED	LS	3/88
.XXX = ±	CHECKED		
ANGLES = ±	APPROVED		

INCHES

THIRD ANGLE PROJECTION

DO NOT SCALE THIS DRAWING !!!



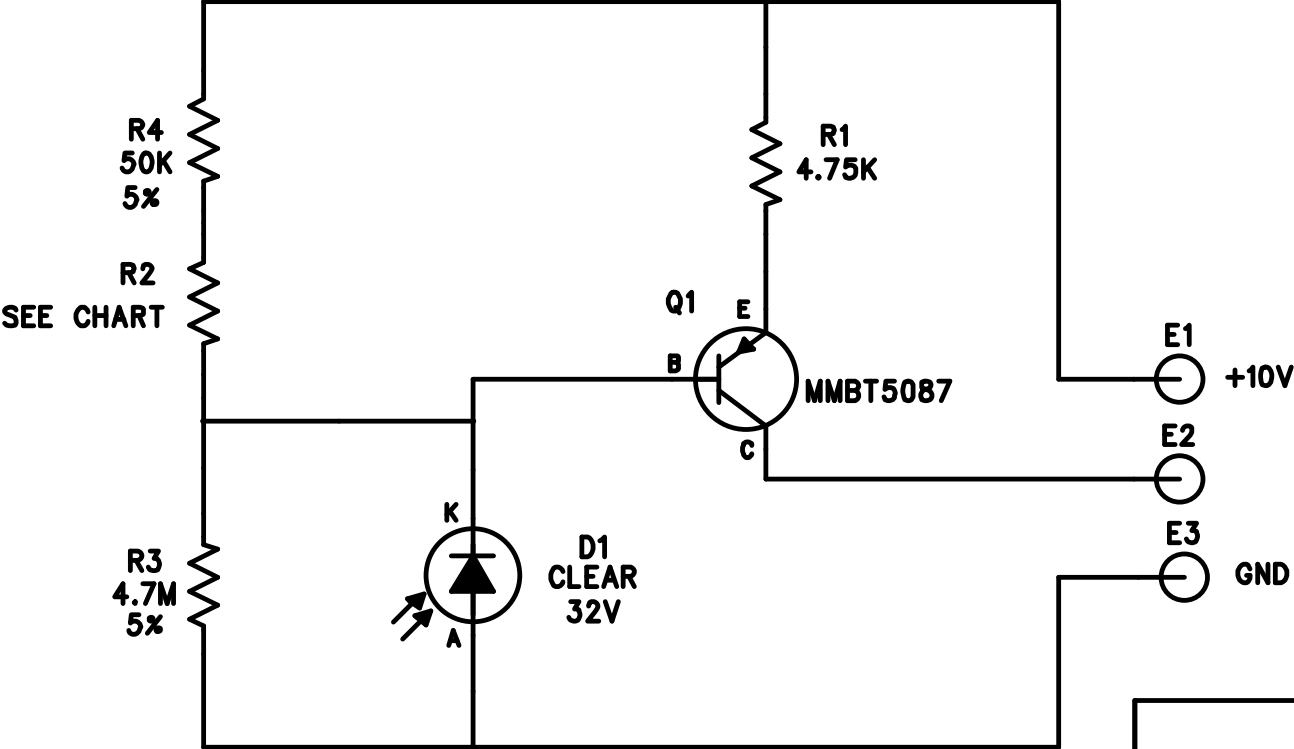
Invivo Research Inc.
PRECISION BIOMEDICAL INSTRUMENTS
Subsidiary of Invivo Corporation
12601 RESEARCH PARKWAY., ORLANDO, FL 32826

TITLE: SCHEMATIC: ABO6JJ
NEO CIRCUIT ADAPTER, OMNI-TRAK

CAD SCALE: NA	SHEET: 1 OF 1	DWG. NO.: C85B124	REV.: C
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B	PER ECN NO. 8020	SLC	04JAN01
A	PER ECN NO. 4566	CHY	11OCT95
REV.	DESCRIPTION	BY	DATE



RESISTOR CHART		
ASSY. P/N	ITEM/REF. DES.	VALUE
AB60	R2	169K 1%
AB60A	R2	187K 1%

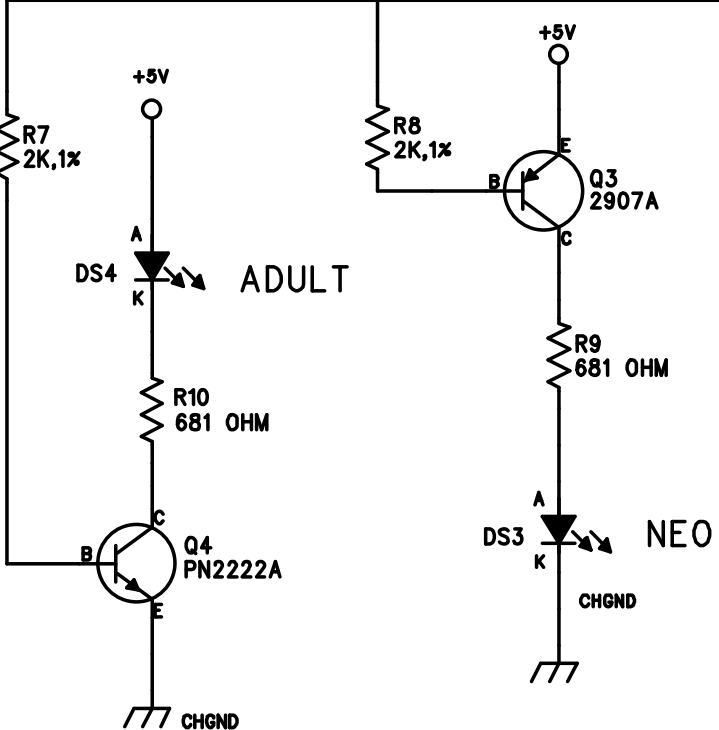
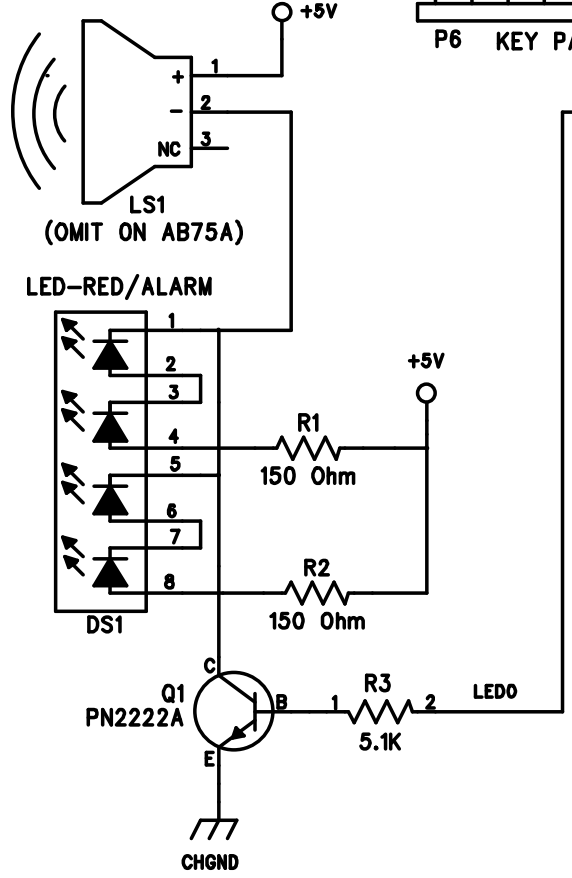
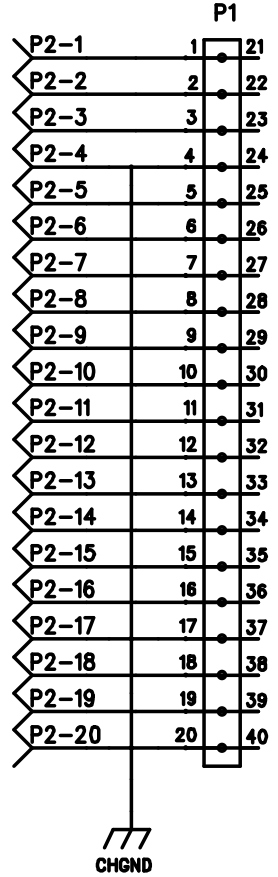
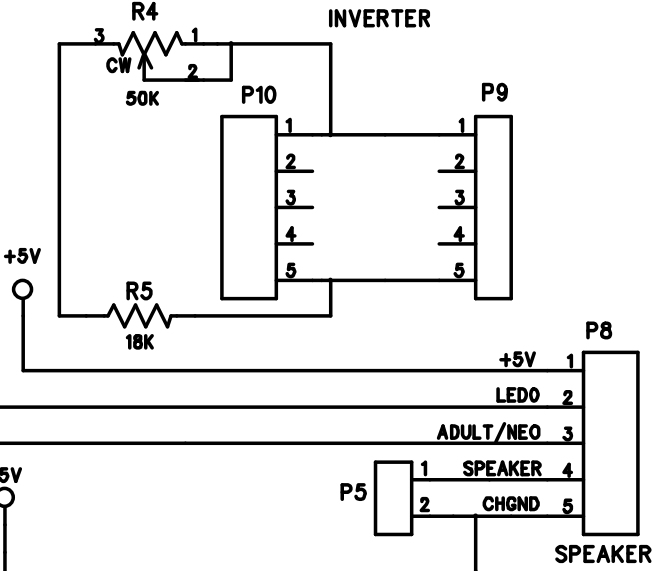
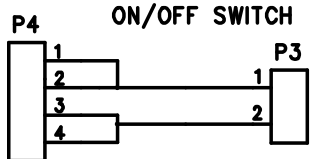
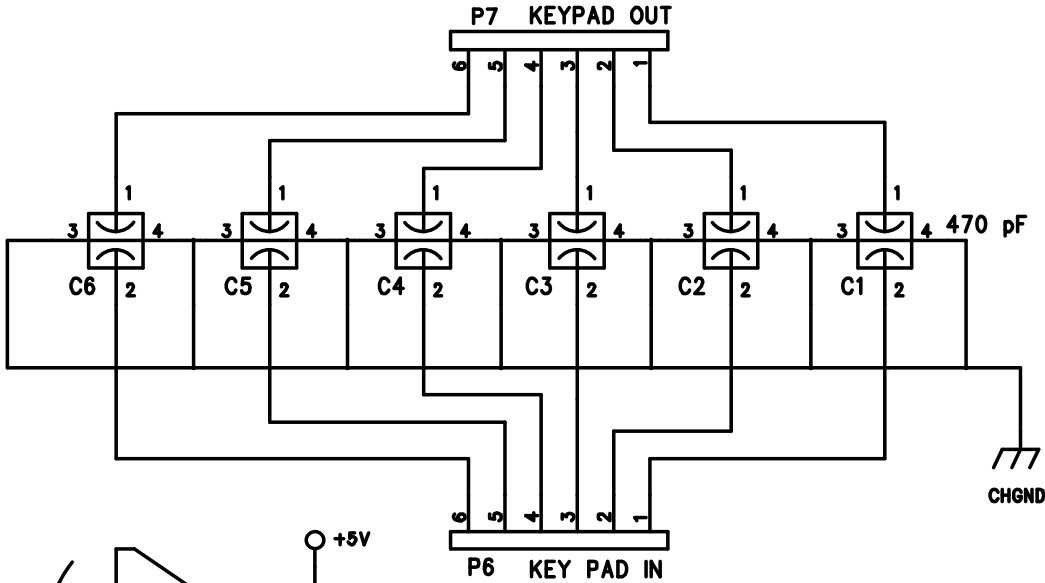
Invivo Research, Inc.
12601 Research Parkway Orlando, Florida 32826

SCHEMATIC: AB60/AB60A
PCA, MR F.O. SAT SENSOR, OPTO 111

DRAWN: SL CASTEL	DATED: 04JAN01
CHECKED:	DATED:
QUALITY CONTROL:	DATED:
RELEASED:	DATED:

BARE BOARD REF.	SIZE:	DRAWING NO:	REV:
B137B	A	C85B177	B
SCALE: NONE		SHEET: 1 OF 1	

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COMPANY: INVIVO RESEARCH, INC.
12601 RESEARCH PARKWAY, ORLANDO, FL 32826

TITLE: SCHEMATIC: AB75/AB75A
PCA, INTERCONNECT, 3150/3150M

CODE: B169

SIZE: B

DRAWING NO: C85B208

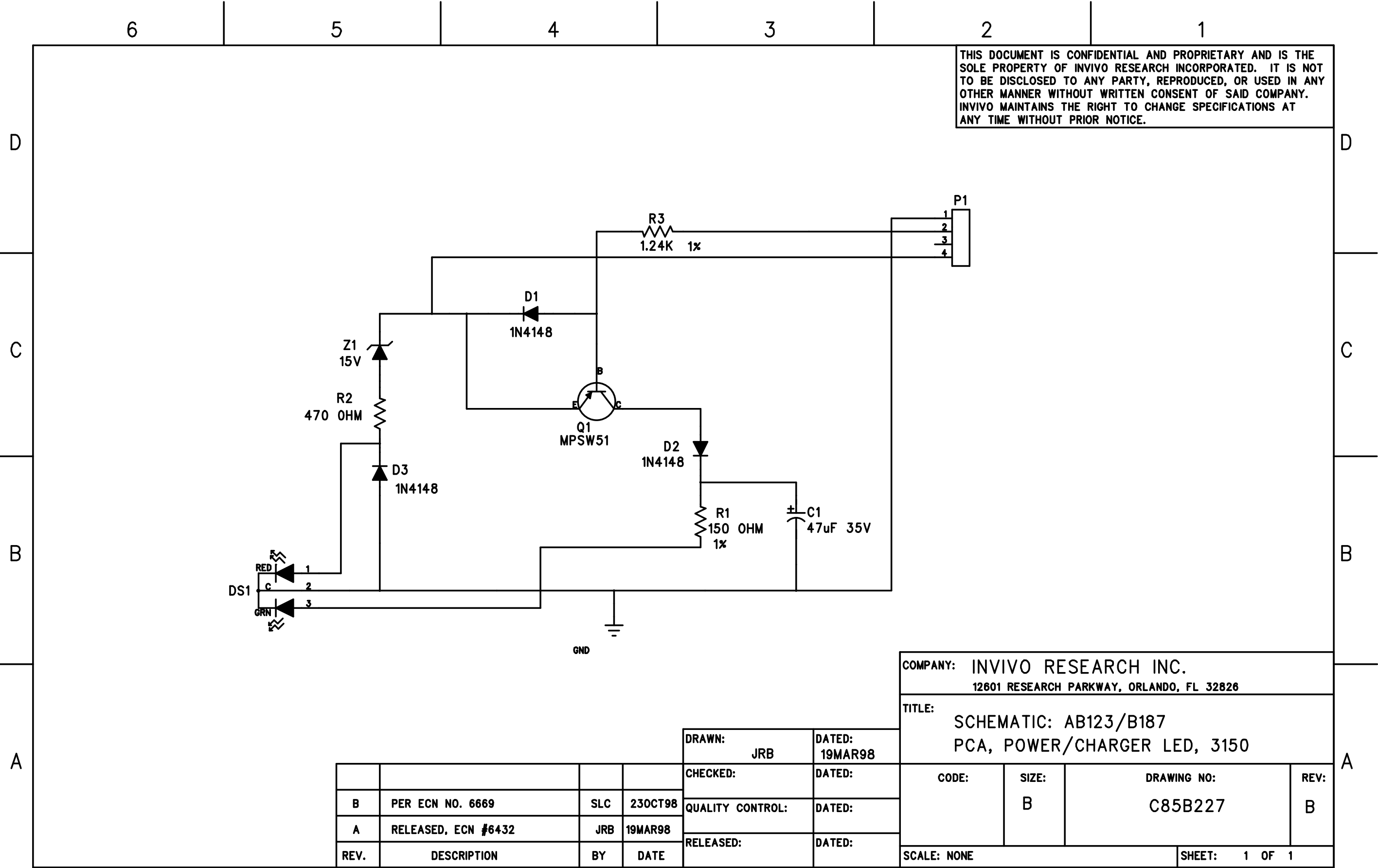
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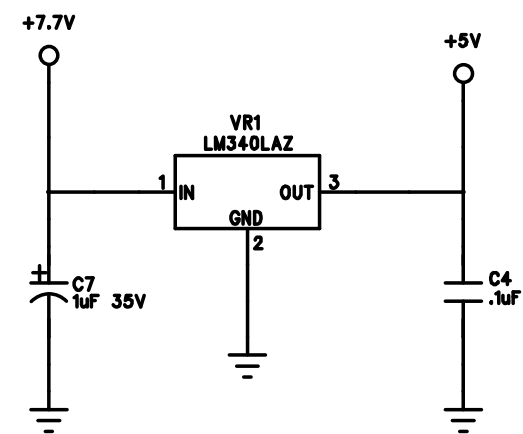
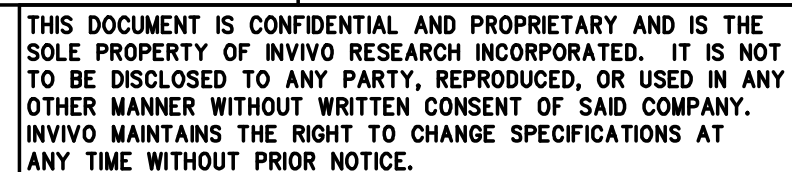
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SHEET: 1 OF 1

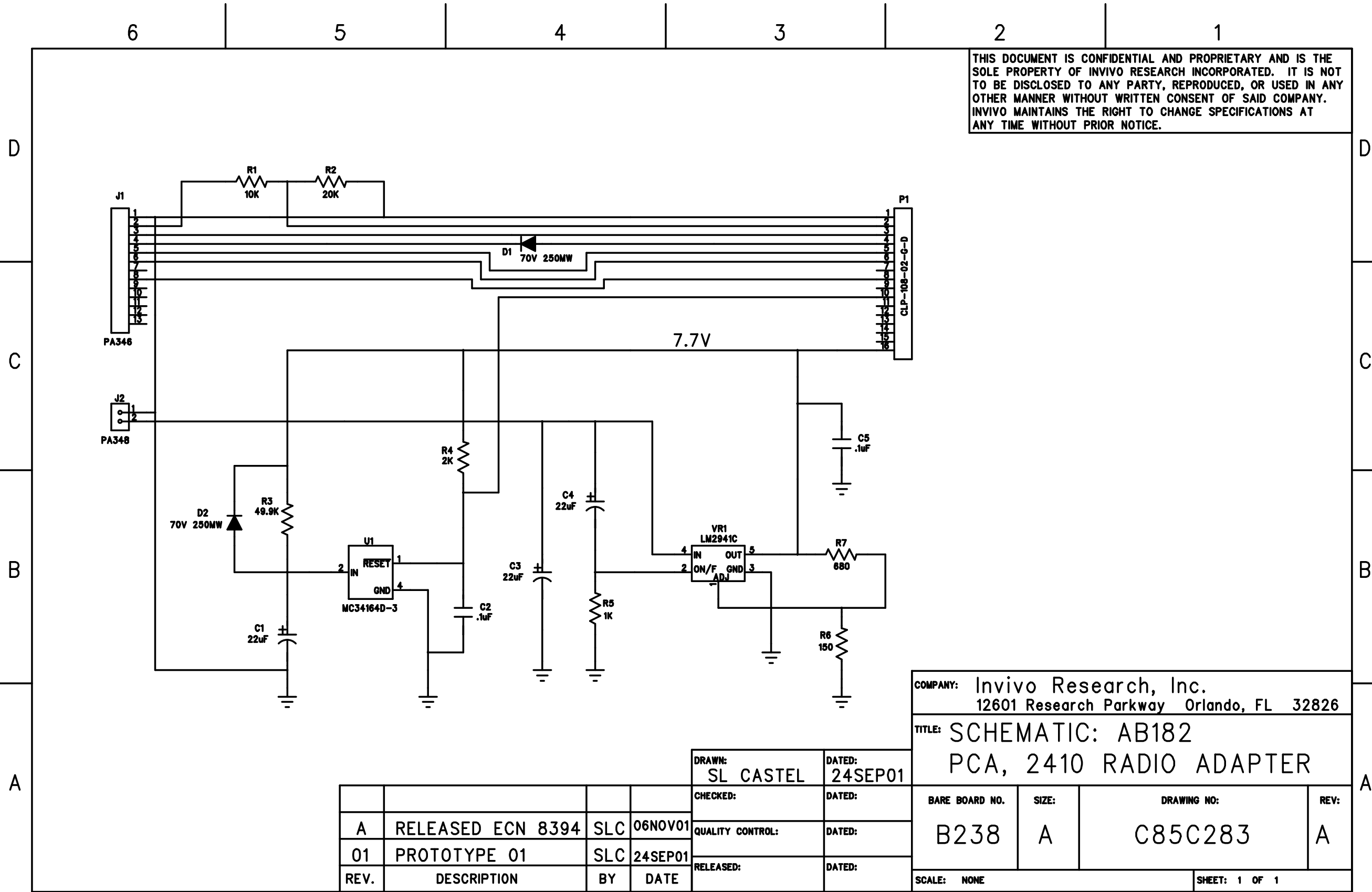
C	PER ECN #7862	SLC	27JUN00
B	PER ECN #6297	JRB	14JAN98
A	RELEASED, ECN #5825	JRB	10JUL97
REV.	DESCRIPTION	BY	DATE

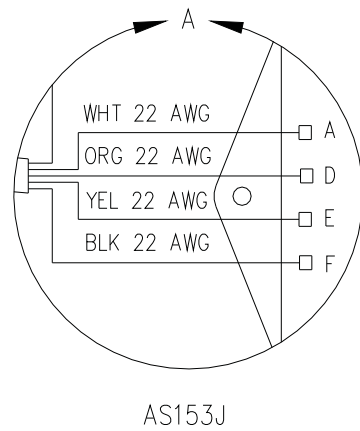
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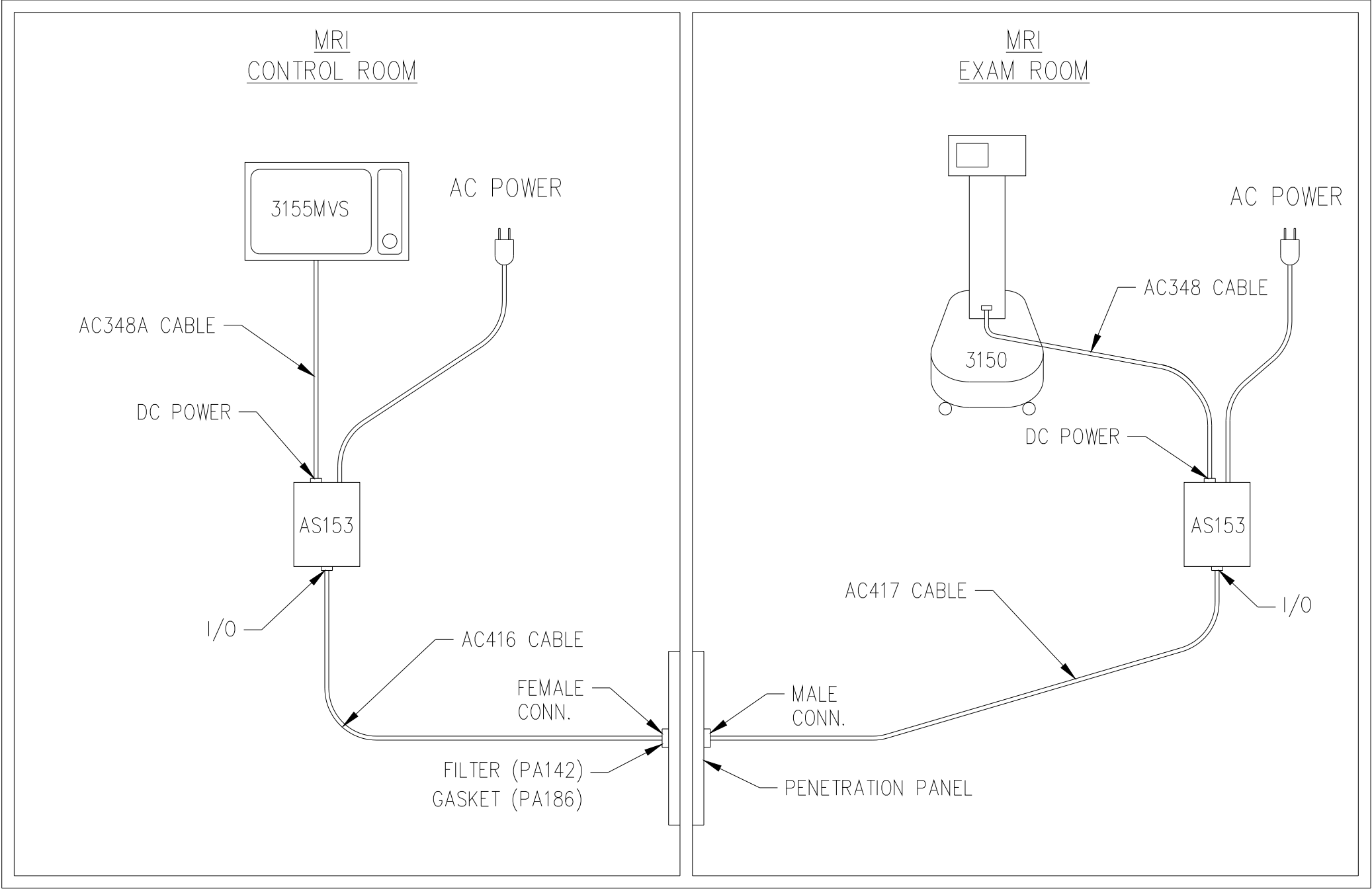




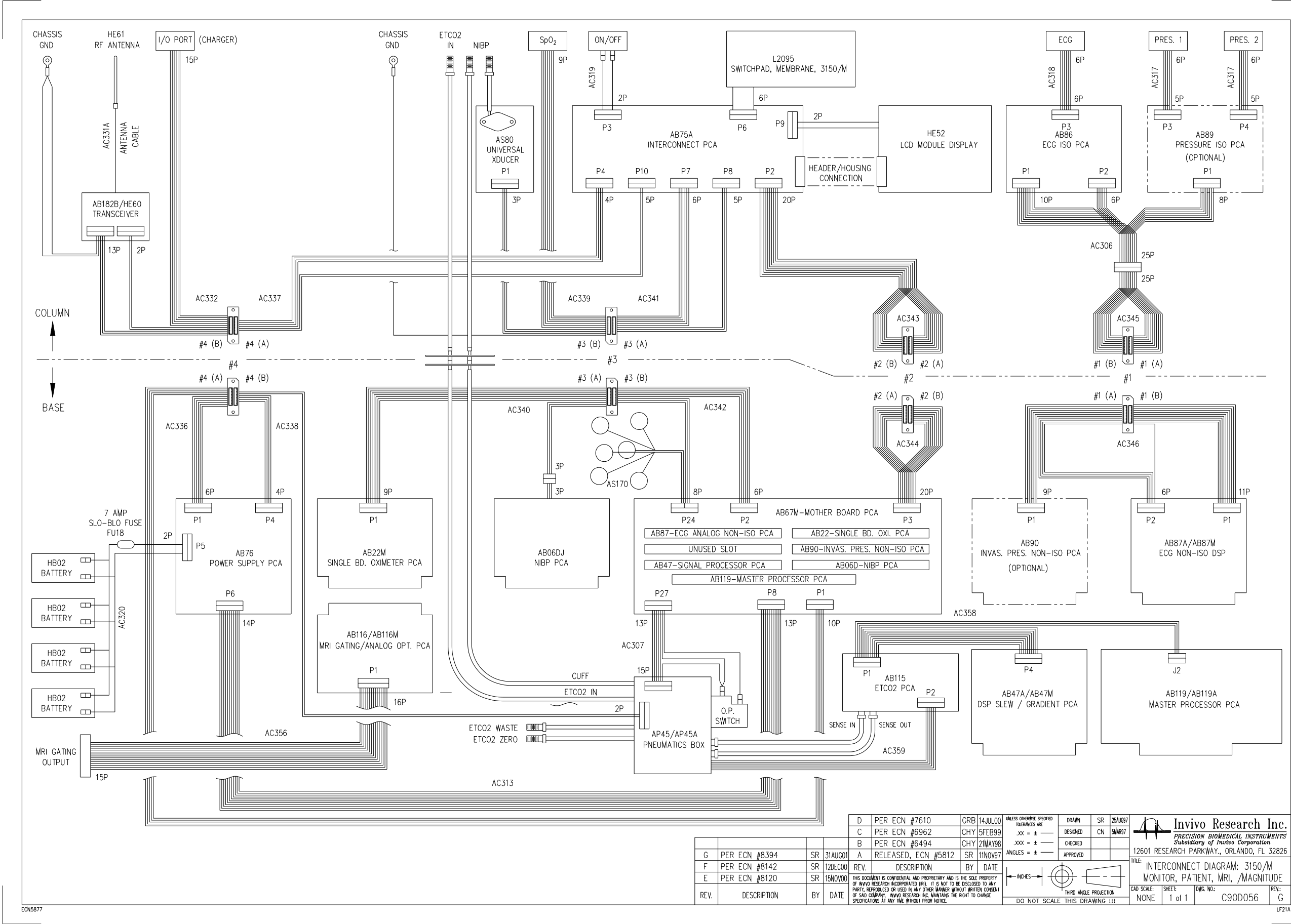
COMPANY:		INVIVO RESEARCH INC. 12601 Research Parkway, Orlando, Florida, 32826	
TITLE:		SCHEMATIC: AB129 PCA, RS-485 TRANSCEIVER BOARD	
PCB	SIZE:	DRAWING NO:	REV:
B194	C	C85C234	A
SCALE: NONE		SHEET: 1 OF 1	



ECN5877

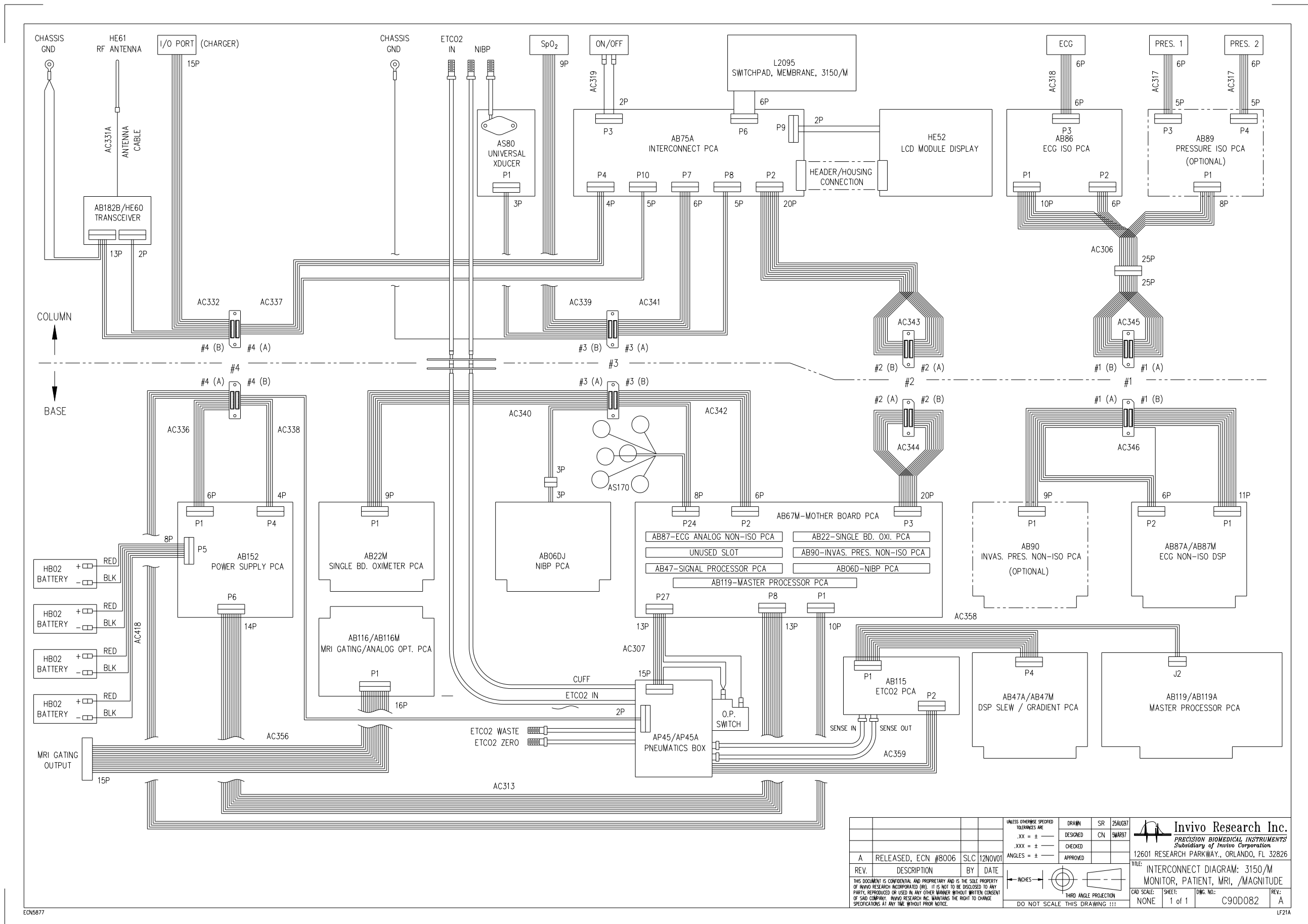


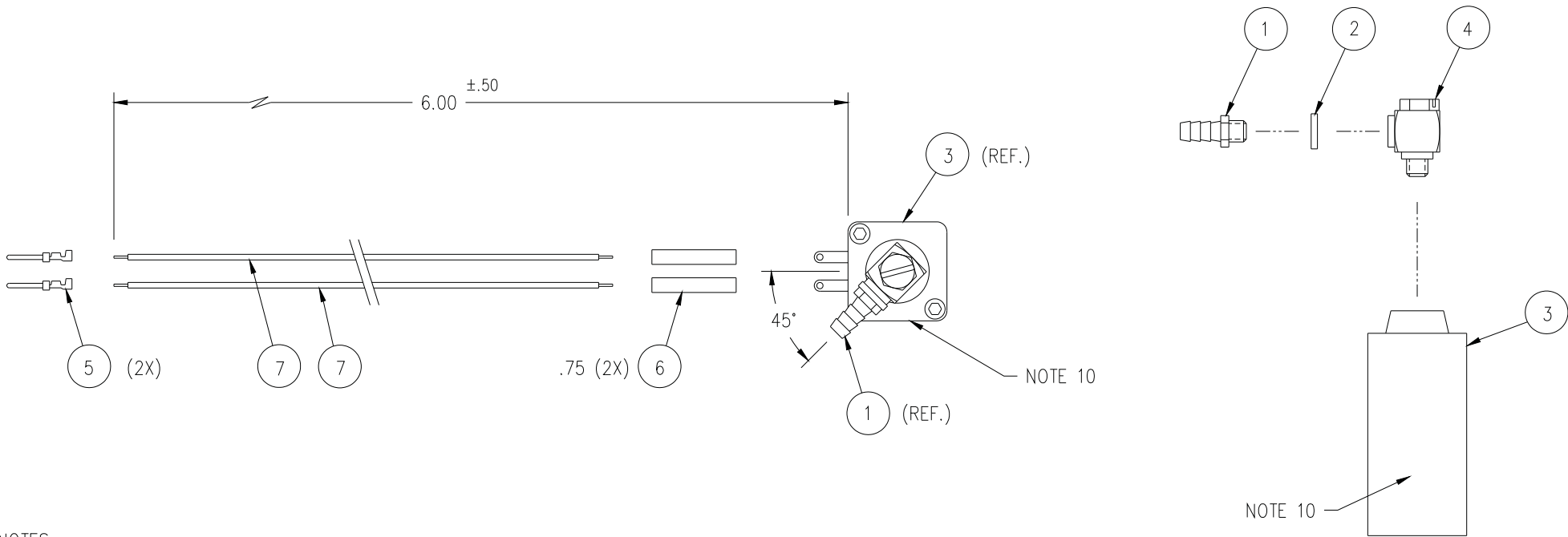
				UNLESS OTHERWISE SPECIFIED TOLERANCES ARE	DRAWN	CHY	2AUG00	 Invivo Research Inc. <i>PRECISION BIOMEDICAL INSTRUMENTS</i> <i>Subsidiary of Invivo Corporation</i> 12601 RESEARCH PARKWAY., ORLANDO, FL 32826		
				.XX = ±	DESIGNED	JO	2AUG00			
				.XXX = ±	CHECKED					
				ANGLES = ±	APPROVED					
A	RELEASED, ECN #7663	CHY	10AUG00					TITLE: INTERCONNECT DIAGRAM HARDWARE INSTALLATION, 3155MVS/3150		
REV.	DESCRIPTION	BY	DATE					CAD SCALE:	SHEET:	DWG. NO.:
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				THIRD ANGLE PROJECTION						REV: A
				DO NOT SCALE THIS DRAWING !!!						



ECN5877

LF21A



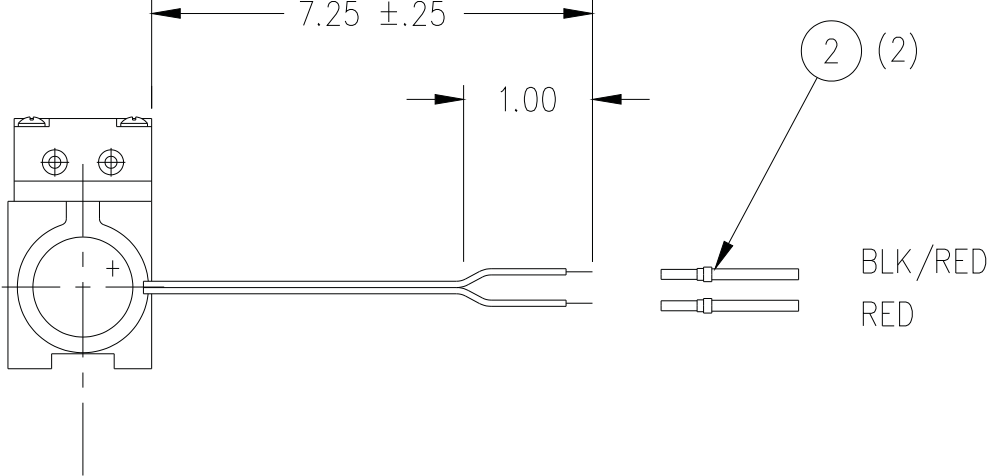
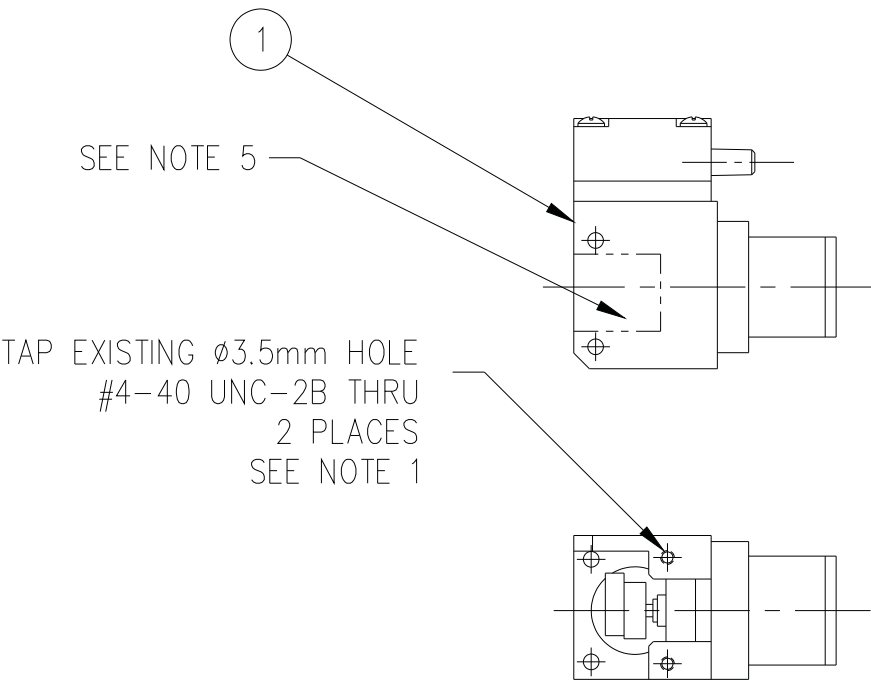


NOTES:

1. ASSEMBLE P/Ns HP06, HP14, HP30, AND HP40 (ITEMS 1–4) AS SHOWN IN DETAIL A, USING P/N M007 RED LOCTITE (ITEM 8) AS REQUIRED. TIGHTEN HP06 TO 10 IN–LB. & HP40 TO 18 IN–LB.
2. CUT TWO WIRES (ITEMS 7) TO 5.50 LENGTH.
3. STRIP WIRES .093 ON ONE END AND .250 ON THE OTHER.
4. TIN .250 STRIPPED END OF EACH WIRE.
5. CRIMP P/N PA77 CONTACT (ITEM 5) ONTO UNTINNED END OF EACH WIRE.
6. ROUTE TO INSPECTION.
7. J–HOOK TINNED END OF WIRES AND SOLDER TO P/N HP30 VALVE TERMINALS (ITEM 3).
8. ROUTE TO INSPECTION.
9. SLIDE .75 PIECE OF P/N WT04 HEAT SHRINK (ITEM 6) COMPLETELY OVER VALVE TERMINAL AND SHRINK.
10. USING AN INDELIBLE MARKER OF CONTRASTING COLOR, PRINT ASSEMBLY NUMBER, REVISION, LOT NUMBER AND ASSEMBLER INITIALS ON SIDE OF VALVE IN APPROXIMATE AREA SHOWN.
11. ROUTE TO INSPECTION.

8	M007	A/R	ADHESIVE, LOCTITE, 262, RED, THDLK.
7	W012	10.50	22 GAGE, 19 x 34, YEL, UL–1429
6	WT04	1.50	HEAT SHRINK 3/32” ID BLACK
5	PA77	2	CONTACT, PIN, CRIMP, 24–20 AWG
4	HP40	1	FITTING, ADJUSTABLE "L" 15002–1
3	HP30	1	VALVE, PNEUMATIC, 3–WAY, 12VDC
2	HP14	1	GASKET, BARB 11761 BULK
1	HP06	1	FITTING, BARB 11752–3
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE .XX = ± .03 .XXX = ± .015 ANGLES = ± —	DRAWN	SR	9JUN97
	DESIGNED	DS	4DEC96
	CHECKED		
	APPROVED		
INCHES THIRD ANGLE PROJECTION DO NOT SCALE THIS DRAWING !!!			
Invivo Research Inc. PRECISION BIOMEDICAL INSTRUMENTS Subsidiary of Invivo Corporation 12601 RESEARCH PARKWAY., ORLANDO, FL 32826 TITLE: ASSEMBLY: AP43 ASSY, VALVE, 3150 CAD SCALE: 1 : 1 SHEET: 1 OF 1 DWG. NO.: C94B757 REV.: C			

C	PER ECN #6490	JRB	6APR98
B	PER ECN #6333	KCO	2FEB98
A	RELEASED, ECN #5812	SR	11NOV97
REV.	DESCRIPTION	BY	DATE
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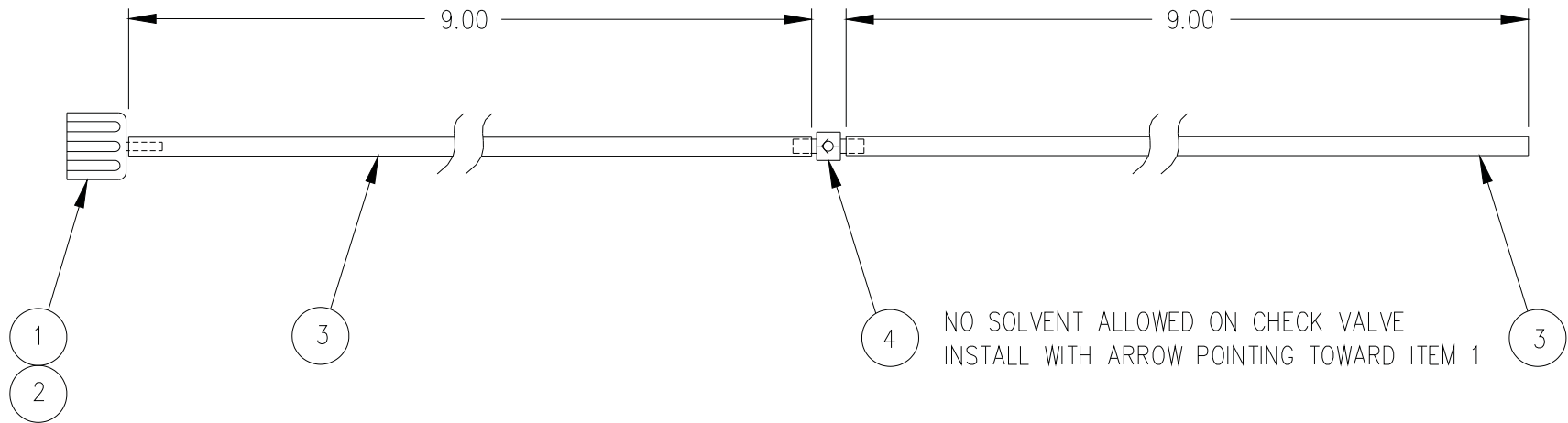


NOTES:

1. TAP (2) EXISTING HOLES IN P/N HP98 PUMP (ITEM 1) AS SHOWN.
2. CUT WIRES SUPPLIED ON PUMP TO 7.25" LG. SPLIT WIRES TO 1.00".
3. STRIP WIRES FOR P/N PA243 TERMINALS (ITEM 2) PER AI046.
4. CRIMP TERMINALS ONTO STRIPPED ENDS.
5. USING A PERMANENT MARKER, PRINT ASSEMBLY NUMBER, REVISION, LOT NUMBER & ASSEMBLER INITIALS IN AREA SHOWN.
6. ROUTE TO INSPECTION.

A	PER ECN #6450	RLM	27FEB98
REV.	DESCRIPTION	BY	DATE
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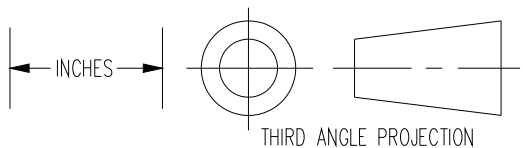
2	PA243	2	CONTACT, SKT, 28-26 AWG, MACHINED
1	HP98	1	PUMP, DIAPHRAGM, 12 VDC, ASF
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE .XX = ± -- .XXX = ± --- ANGLES = ± --	DRAWN DESIGNED CHECKED APPROVED	RLM DDS 27FEB98 FEB98 	Invivo Research Inc. <i>PRECISION BIOMEDICAL INSTRUMENTS</i> <i>Subsidiary of Invivo Corporation</i> 12601 RESEARCH PARKWAY., ORLANDO, FL 32826
TITLE: ASSEMBLY: AP47 ASSEMBLY, PUMP, CO2 – 3150			
CAD SCALE: 1 : 1	SHEET: 1 of 1	DWG. NO.: C94B797	REV.: A

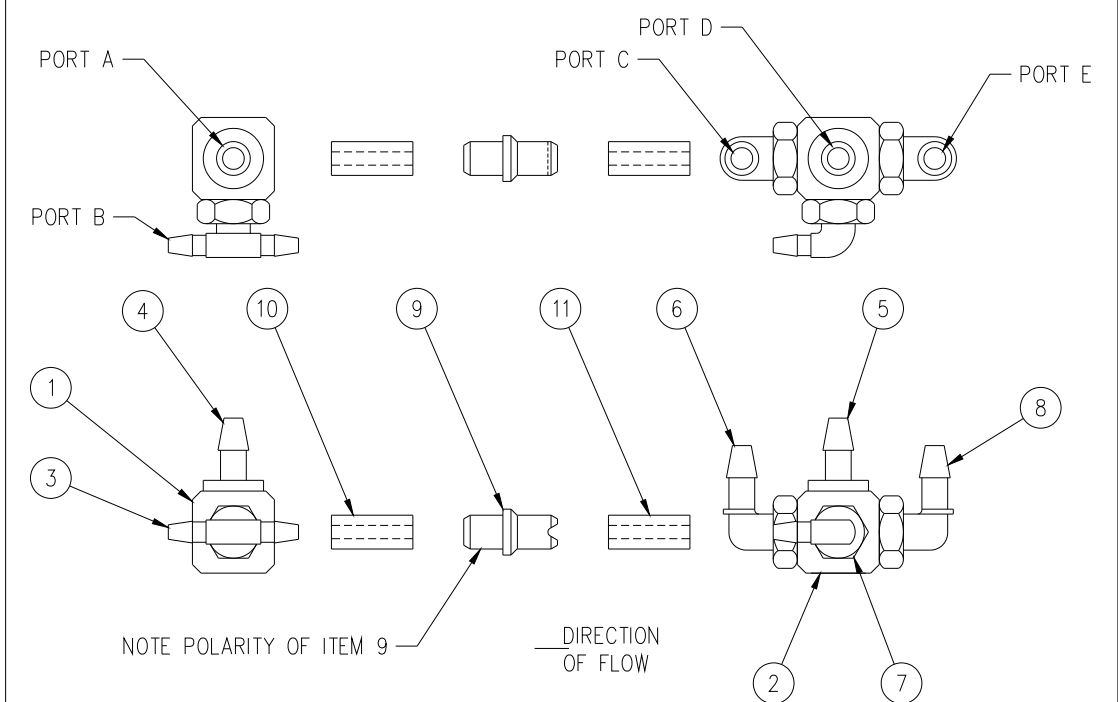


NOTES:

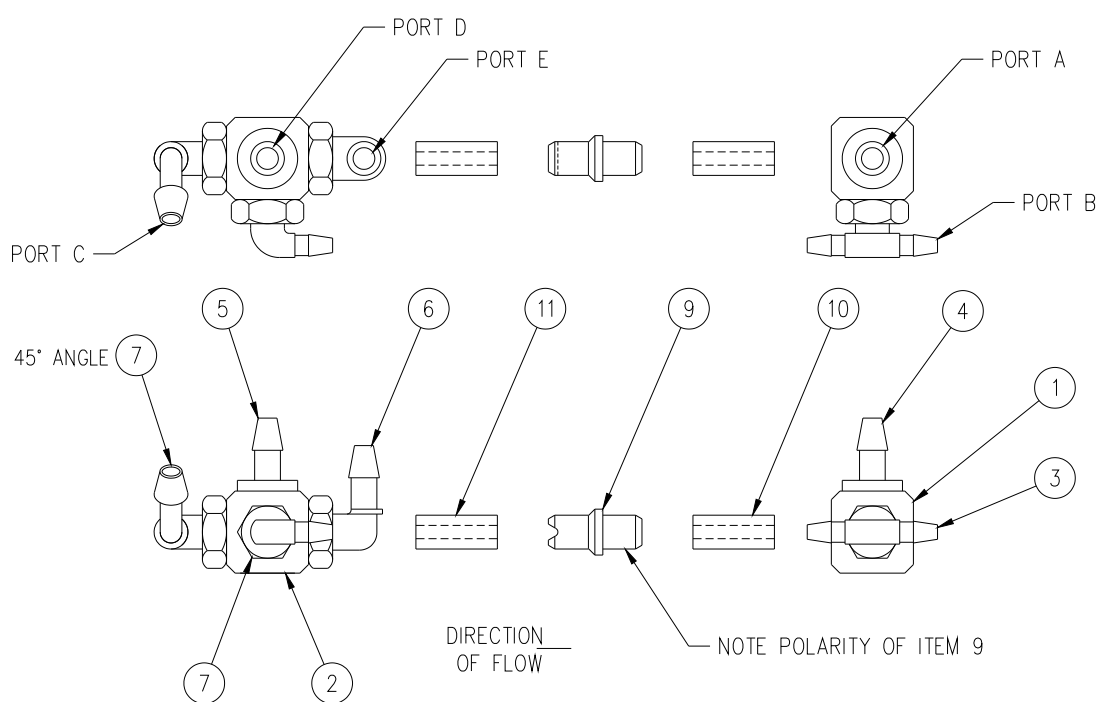
1. BOND ITEM'S 3 & 4 USING METHYLENE CHLORIDE SOLVENT. APPLY SOLVENT SPARINGLY TO JOINT. ALLOW TO DRY FOR TWO HOURS AT ROOM TEMPERATURE PRIOR TO USE.

A	RELEASED, ECN #6450	RLM	9MAR98
REV.	DESCRIPTION	BY	DATE
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4	HP60	1	CHECK VALVE, 1/16"	
3	HP50	18.0"	TUBING, .06 ID X .12 OD X .03, CLEAR	
2	HP57A	1	LOCKING NUT, NYLON	
1	HP57	1	FITTING, MALE, LOCKING LUER, 1/16" BARB	
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION	
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE .XX = ± -- .XXX = ± --- ANGLES = ± --	DRAWN	RLM	9MAR98	
	DESIGNED	RLM	MAR98	
	CHECKED			
	APPROVED			
			 Invivo Research Inc. <i>PRECISION BIOMEDICAL INSTRUMENTS</i> <i>Subsidiary of Invivo Corporation</i> 12601 RESEARCH PARKWAY., ORLANDO, FL 32826	
THIRD ANGLE PROJECTION				
DO NOT SCALE THIS DRAWING !!!				
TITLE: ASSEMBLY: AP48 CHECK VALVE, ETCO2, 3150				
CAD SCALE: 1 : 1		SHEET: 1 of 1	DWG. NO.: C94B798	REV.: A



AP37 ASSY SHOWN



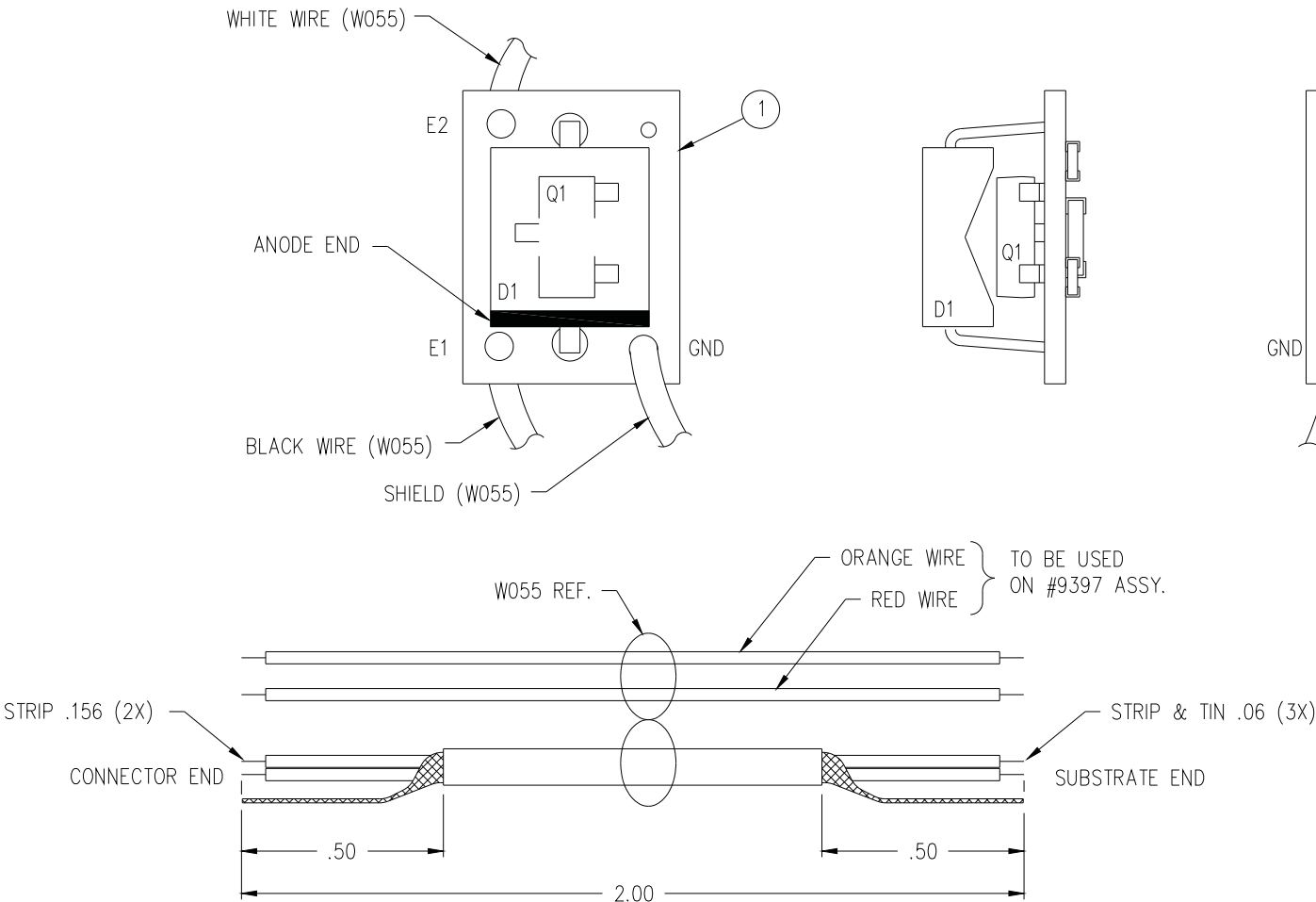
AP37A ASSY SHOWN

NOTES:

- ASSEMBLE ITEMS 1, 3 & 4 AS ONE UNIT & ITEMS 2, 5, 6, 7 & 8 AS A SECOND UNIT. THEIR ASSEMBLY IS OUTLINED IN STEPS A THRU E USING P/N EN08 VINYL CEMENT.
 - LOOSELY INSERT FITTINGS INTO JUNCTION BLOCK.
 - APPLY SOLVENT SPARINGLY TO JOINT. ALLOW TWO SECONDS FOR PLASTIC TO DISSOLVE. PRESS PARTS TOGETHER FIRMLY.
 - FOR BEST RESULTS BOND EACH JOINT AS IT IS ASSEMBLED.
 - CAUTION: NEATNESS IS CRITICAL. OVER USE OF SOLVENT WILL DEGRADE THE APPEARANCE OF THE PRODUCT.
 - ALLOW TO DRY FOR TWO HOURS AT ROOM TEMPERATURE.
- AFTER UNITS HAVE DRIED, ASSEMBLE THE 2 UNITS TO ITEMS 9, 10 & 11 IN THE ORDER SHOWN NOTING THE POLARITY OF ITEM 9.

D	PER ECN #6790	BY	19AUG98
C	PER ECN #5591	BY	4MAR97
B	PER ECN #5177	BY	7/22/96
A	PER ECN #2033	BY	9/89
REV.	DESCRIPTION	BY	DATE
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10, 11	HP65-4	2	TUBING, 1/16" X 1/8", CLEAR, .500" LG
9	HP64	1	ORIFICE, FLOW CONTROL, .012"
7	HP75	1/2	FITTING, "L" PORT, 1/16"
6, 8	HP76	2/1	FITTING, "L" PORT, 3/32"
4, 5	HP73	2	FITTING, STRAIGHT PORT, 3/32"
3	HP74	1	FITTING, TEE, 1/16"
2	HP72	1	CHECK VALVE BODY, 4 PORT
1	HP71	1	CHECK VALVE BODY, 2 PORT
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE .XX = ± .03 .XXX = ± .015 ANGLES = ± 1°			
DRAWN	DRM	3/89	 Invivo Research Inc. <i>PRECISION BIOMEDICAL INSTRUMENTS</i> 12601 RESEARCH PARKWAY., ORLANDO, FL 32826
DESIGNED	RY	11/89	
CHECKED			
APPROVED			TITLE
ASSEMBLY: AP37 & AP37A ASSEMBLY, MANIFOLD, C02			
CAD SCALE	SHEET	DWG. NO.	REV.
2:1	1 of 1	C94C460	D



WIRE PREP. DETAIL
CAD SCALE: NONE

NOTES

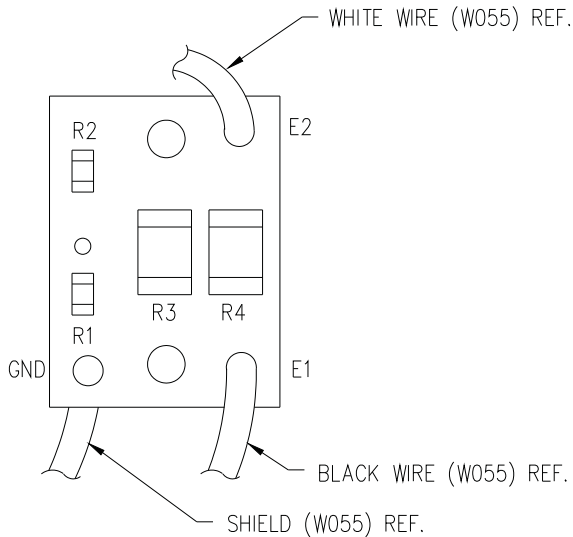
SUBSTRATE END

- ON TRANSISTOR PAD SIDE OF P/N B137B CIRCUIT BOARD, SOLDER P/N QX06, TRANSISTOR IN LOCATION AS SHOWN
- ON OPPOSITE SIDE OF P/N B137B, SOLDER P/N's RX372 OR RX373 (PER ASSY. CHART), RX371, RX131, AND RXT00 AT LOCATIONS SHOWN.
- ON TRANSISTOR SIDE OF B137B, MOUNT DP00 AS SHOWN.
- PREPARE WIRES FROM W055, CABLE AS STATED BELOW, AND ATTACH TO B137B AS SHOWN IN MAIN VIEWS.
 - STRIP JACKET BACK .50 SEPARATING BLACK & WHITE WIRES AND SHIELD.
 - STRIP & TIN BLACK & WHITE WIRES .06, AND TIN SHIELD .06
- AFTER ASSEMBLY IS COMPLETE, CLEAN BOARD ENSURING REMOVAL OF SOLDER FLUX AND CONDUCTIVE SALTS.

CONNECTOR END

- STRIP JACKET BACK .50 SEPARATING BLACK & WHITE WIRES AND SHIELD
- STRIP BLACK AND WHITE WIRES .125

NOTE: W055 ORANGE AND RED WIRES ARE TO BE SET ASIDE AND USED ON #9397, CABLE ASSEMBLY



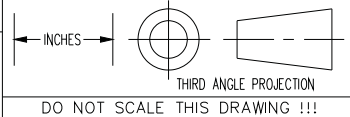
ASSY. P/N AB60A			
R2	RX372	1	RES, 187K, 1%, .063W, ±250PPM, 0402

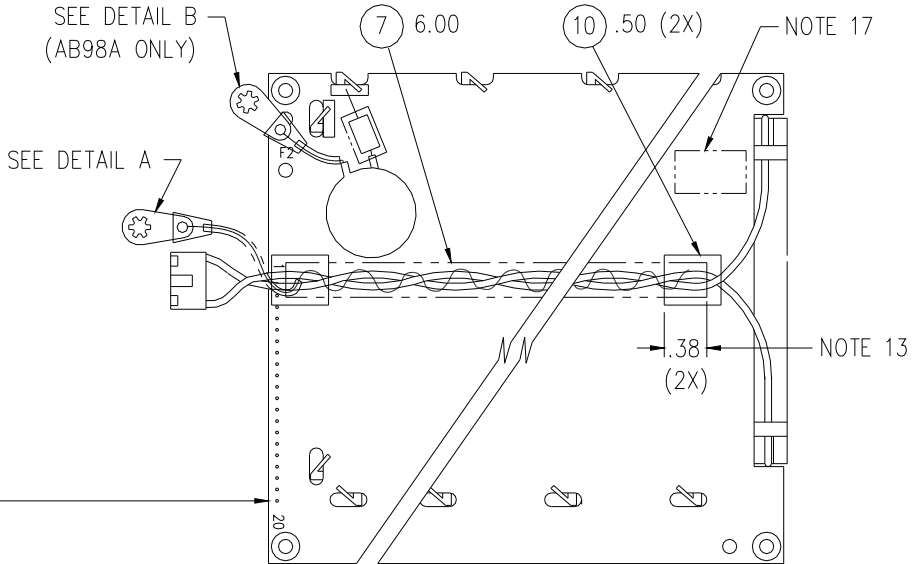
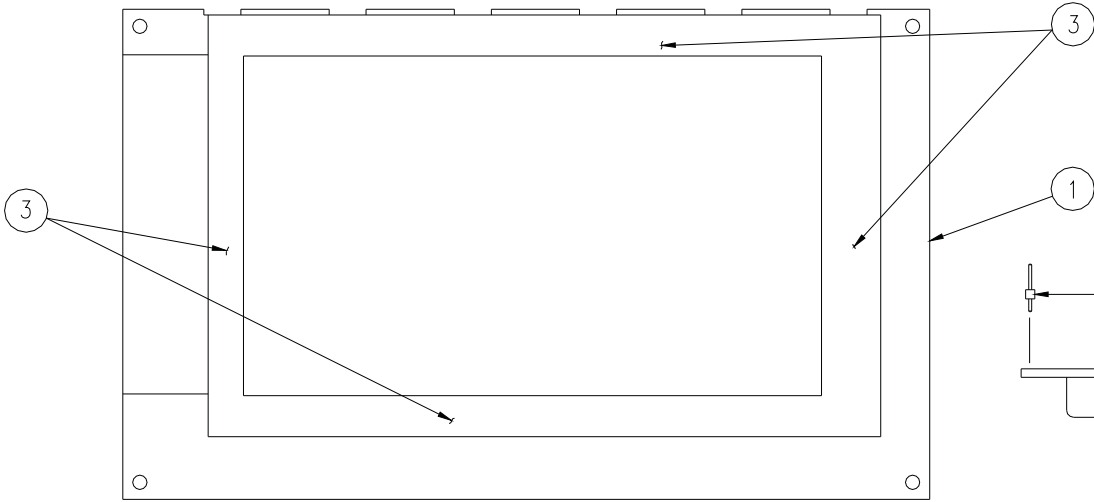
ASSY. P/N AB60			
R2	RX373	1	RES, 169K, 1%, .063W, ±250PPM, 0402

REF.	W055	1	CABLE, SHD, 2x2 COND., 32 GA., SILCN.
R4	RTX00	1	THERMISTOR, 50K, 5%, 0805
R3	RX131	1	RES., 4.7M, .1W, 5%, 200 PPM, 0805
R2	SEE CHART	—	RES, 1%, .063W, ±250PPM, 0402
R1	RX371	1	RES., 4.7K, 1%, .063W, ±250PPM, 0402
Q1	QX06	1	XSTR., PNP, LOW NOISE, SOT23, 5087
D1	DP00	1	PHOTODIODE, PIN, CLEAR, 60 DEG.
1	B137B	1	PCB, MR F.O. SAT SNSR., OPTO III REV. B

ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE	DRAWN	CHY	6/1/93
.XX = ± —	DESIGNED	RS	6/1/93
.XXX = ± —	CHECKED		
ANGLES = ± —	APPROVED		
Invivo Research Inc. PRECISION BIOMEDICAL INSTRUMENTS Subsidiary of Invivo Corporation 12601 RESEARCH PARKWAY., ORLANDO, FL 32826			
TITLE: ASSEMBLY: AB60/AB60A PCA, MR F.O. SAT SNSR.,OPTO III			
CAD SCALE:	SHEET:	DWG. NO.:	REV.:
1:1	1 OF 1	C94C630	D

D	PER ECN #8020	SR	8JAN01
C	PER ECN #3831	JRB	2/20/96
B	PER ECN #4566	CHY	10/11/95
A	RELEASED, ECN #4010	CHY	6/10/94
REV.	DESCRIPTION	BY	DATE
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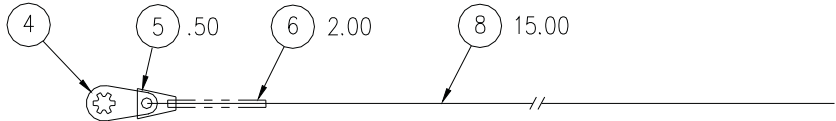




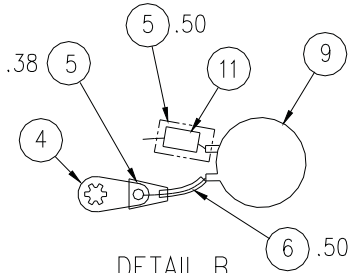
CAUTION: GLASS SURFACE IS EASILY DAMAGED, HANDLE ACCORDINGLY. PACKAGE IN DIVIDED CONTAINERS OR P/N M130 (REF.) BUBBLE BAGS.

NOTES

1. USE M127 OR M128 "NO CLEAN" SOLDER .
2. REFERRING TO DETAIL A, CUT BUSS WIRE (ITEM 8) TO 15.00 AND J-HOOK AND SOLDER TO TERMINAL (ITEM 4).
3. REFERRING TO DETAIL B, CUT CAPACITOR LEADS (ITEM 9) TO .75. ORIENT CAPACITOR SO AS TO KEEP MANUFACTURERS' LABELING FACING UP. ADD .50 LENGTH OF SLEEVING (ITEM 6) TO ONE LEAD AS SHOWN. ADD BEAD, (ITEM 11) TO OTHER LEAD AND COVER WITH .50 LENGTH OF SLEEVING (ITEM 5). ADD .38 LENGTH OF (ITEM 5) TO LEAD SHOWN AND J-HOOK AND SOLDER TO TERMINAL (ITEM 4). DO NOT SHRINK THE SLEEVING AT THIS TIME.
4. SOLDER CONNECTOR (ITEM 2) TO DISPLAY (ITEM 1) AS SHOWN.
5. SOLDER LEAD FROM CAPACITOR TO GOLD PAD ON BACK OF DISPLAY (ITEM 1) AS SHOWN.
6. ROUTE TO INSPECTION.
7. SLIDE 2.00 LENGTH OF SLEEVING (ITEM 6) AND .50 LENGTH OF SLEEVING (ITEM 5) ONTO LEFT END OF PREPPED BUSS WIRE PER DETAIL A.
8. SHRINK ALL SLEEVING IN PLACE.
9. REMOVE CONNECTOR HOUSING FROM BLACK WIRES ON DISPLAY (ITEM 1). (IN CASE OF DAMAGE TO A TERMINAL, BOTH MUST BE REPLACED WITH PT07 TERMINALS AND PA19 HOUSING, NOT SHOWN. CRIMPED TERMINALS MUST BE INSPECTED. KEEP WIRES EVEN AND AS LONG AS POSSIBLE).
10. WRAP PREPPED BUSS WIRE AROUND BLACK WIRES-THREE TURNS PER INCH-LEAVING 1.25 MAX. LOOSE AT LEFT END.
11. ROUTE TO INSPECTION.
12. SLIDE 6.00 LENGTH OF SLEEVING (ITEM 7) OVER BLACK WIRES AND BUSS WIRE. BE SURE NO BUSS WIRE IS EXPOSED ON RIGHT END. SHRINK SLEEVING.
13. SLIDE TWO .50 LENGTHS OF SLEEVING (ITEM 10) OVER SLEEVED BLACK WIRES, POSITIONED TO OVERLAP ENDS OF PREVIOUSLY APPLIED SLEEVING BY .38, AND SHRINK.
14. REINSTALL CONNECTOR HOUSING ONTO BLACK WIRES. THERE IS NO POLARITY REQUIREMENT.
15. REMOVE PROTECTIVE COVERING FROM DISPLAY AND FRAME.
16. APPLY KAPTON TAPE (ITEM 3) ON THE FRONT FACE OF THE METAL FRAME AROUND THE DISPLAY WINDOW, AS SHOWN. FOLD ANY EXCESS TAPE WIDTH OVER CORNERS OF FRAME.
17. USING A PERMANENT MARKER OF CONTRASTING COLOR, PRINT LOT NUMBER IN AREA SHOWN.



DETAIL A



DETAIL B

11	T069	1	BEAD, FERRITE, 52 OHMS/TURN
10	WT02	1.00	HEAT SHRINK, 1/4" ID BLACK
9	CC13	1	CAP, .01uF, 20%, 3KV, CERAMIC
8	W019	15.00	WIRE, BUSS, SOFT DRAWN, 24 GAGE
7	WT26	6.00	HEAT SHRINK, TYPE SST-7, 1/4" ID, BLACK
6	WT07	2.50	HEAT SHRINK, 3/64" ID, BLACK
5	WT05	1.38	HEAT SHRINK, 3/16" ID, BLACK
4	PT42	2	TERMINAL, LOCKWASHER, #4
3	M088A	20.00	TAPE, KAPTON, .004 THK., 1/2" WD. ROLL
2	PA309A	1	CONN, 20-PIN, SR, HEADER, ST, .100 CTRS.
1	HE52	1	DISPLAY, LCD MODULE (240 X 128)

E	PER ECN #6245	CHY	17DEC97
D	PER ECN #5331	CHY	40CT96
C	PER ECN #5113	SR	15AUG96
B	PER ECN #4976M	CHY	4/10/96
A	RELEASED, ECN #4652	RHK	3/6/96
REV.	DESCRIPTION	BY	DATE

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ITEM / REF. DES.	PART NO.		QTY.
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE .XX = ± .06 .XXX = ± — ANGLES = ± —	DRAWN	RHK	2/28/96
	DESIGNED	RHK	2/28/96
	CHECKED		
	APPROVED		



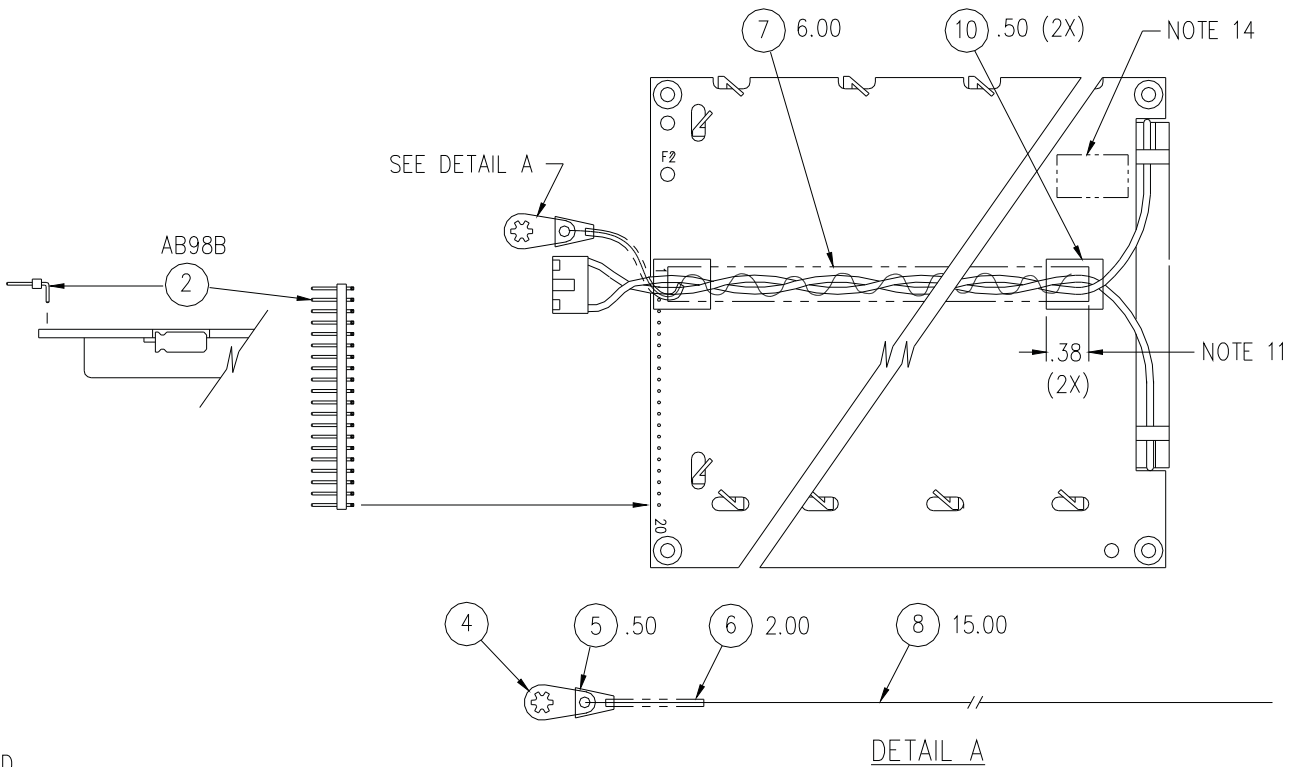
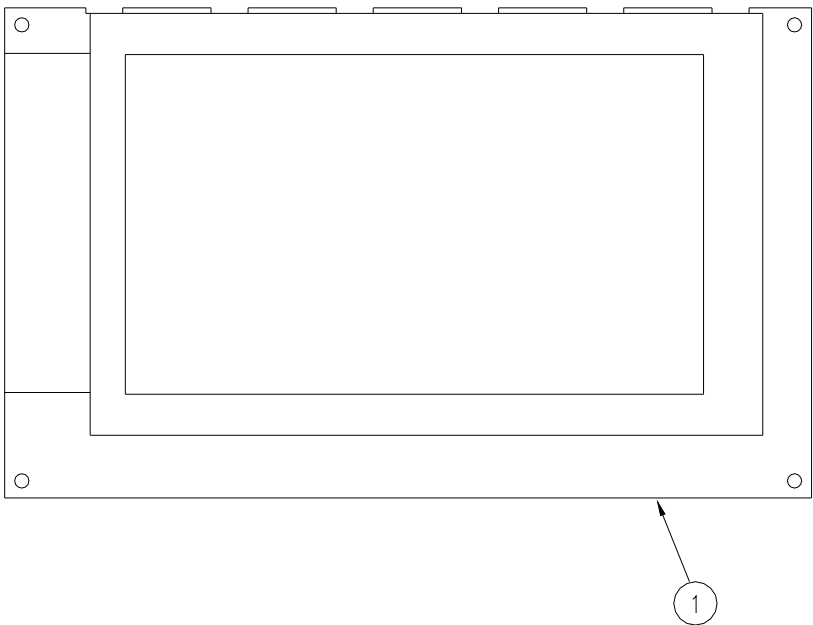
DO NOT SCALE THIS DRAWING !!!



Invivo Research Inc.
PRECISION BIOMEDICAL INSTRUMENTS
12601 RESEARCH PARKWAY., ORLANDO, FL 32826

TITLE
ASSEMBLY: AB98A
PCA, LCD MODULE, OMNI-TRAK SVS

CAD SCALE	SHEET	DWG. NO.	REV.
NONE	1 OF 2	C94C710	E



CAUTION: GLASS SURFACE IS EASILY DAMAGED, HANDLE ACCORDINGLY. PACKAGE IN DIVIDED CONTAINERS OR P/N M130 (REF.) BUBBLE BAGS.

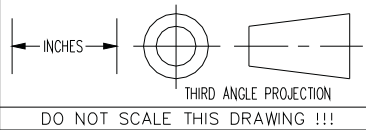
NOTES

1. USE M127 OR M128 "NO CLEAN" SOLDER.
2. REFERRING TO DETAIL A, CUT BUSS WIRE (ITEM 8) TO 15.00 AND J-HOOK AND SOLDER TO TERMINAL (ITEM 4).
3. SOLDER CONNECTOR (ITEM 2) TO DISPLAY (ITEM 1) AS SHOWN.
4. ROUTE TO INSPECTION.
5. SLIDE 2.00 LENGTH OF SLEEVING (ITEM 6) AND .50 LENGTH OF SLEEVING (ITEM 5) ONTO LEFT END OF PREPPED BUSS WIRE PER DETAIL A.
6. SHRINK ALL SLEEVING IN PLACE.
7. REMOVE CONNECTOR HOUSING FROM BLACK WIRES ON DISPLAY (ITEM 1). (IN CASE OF DAMAGE TO A TERMINAL, BOTH MUST BE REPLACED WITH PT07 TERMINALS AND PA19 HOUSING, NOT SHOWN. CRIMPED TERMINALS MUST BE INSPECTED. KEEP WIRES EVEN AND AS LONG AS POSSIBLE).
8. WRAP PREPPED BUSS WIRE AROUND BLACK WIRES-THREE TURNS PER INCH-LEAVING 1.25 MAX. LOOSE AT LEFT END.
9. ROUTE TO INSPECTION.
10. SLIDE 6.00 LENGTH OF SLEEVING (ITEM 7) OVER BLACK WIRES AND BUSS WIRE. BE SURE NO BUSS WIRE IS EXPOSED ON RIGHT END. SHRINK SLEEVING.
11. SLIDE TWO .50 LENGTHS OF SLEEVING (ITEM 10) OVER SLEEVED BLACK WIRES, POSITIONED TO OVERLAP ENDS OF PREVIOUSLY APPLIED SLEEVING BY .38, AND SHRINK.
12. REINSTALL CONNECTOR HOUSING ONTO BLACK WIRES. THERE IS NO POLARITY REQUIREMENT.
13. REMOVE PROTECTIVE COVERING FROM DISPLAY AND FRAME.
14. USING A PERMANENT MARKER OF CONTRASTING COLOR, PRINT LOT NUMBER IN AREA SHOWN.

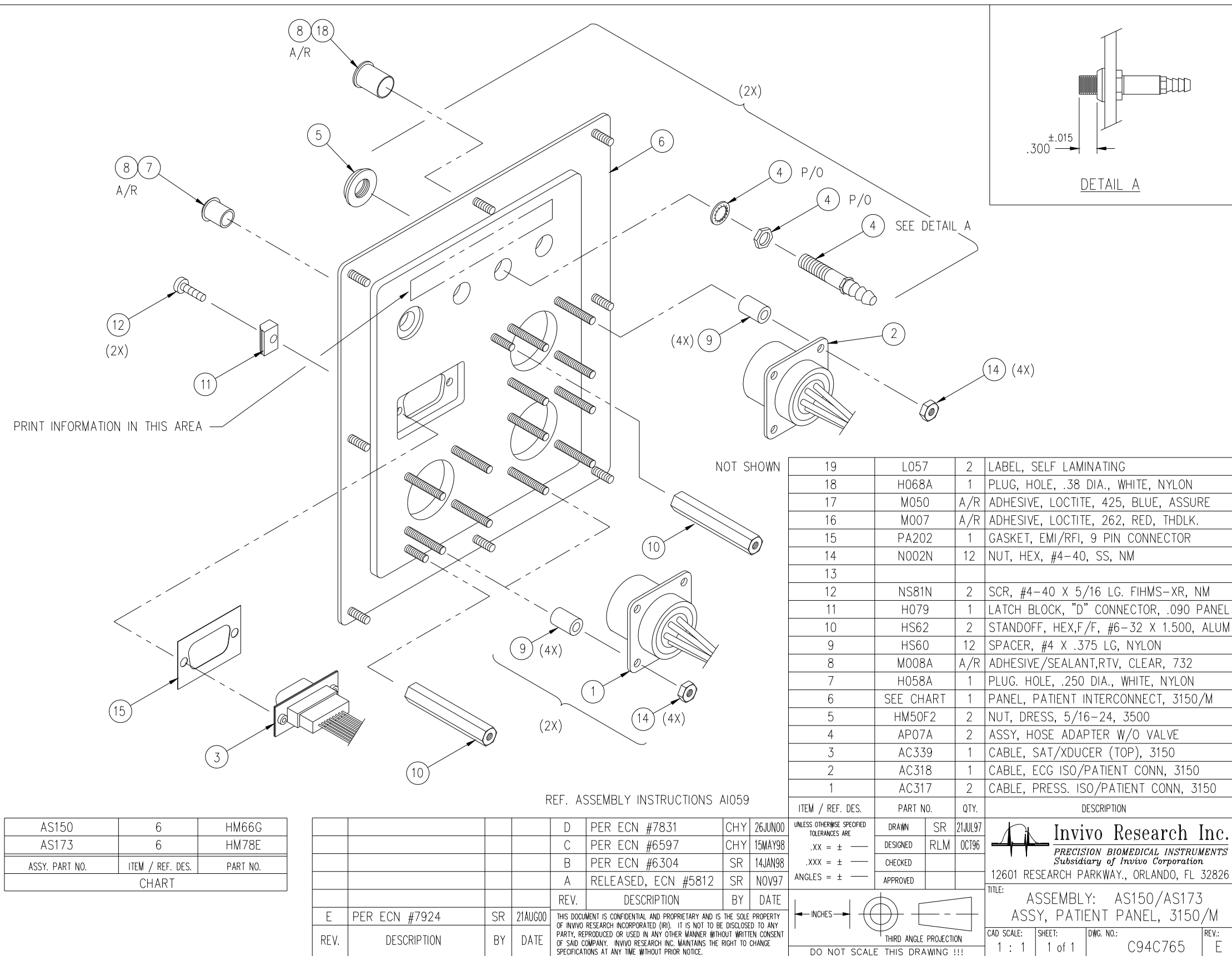
11			
10	WT02	1.00	HEAT SHRINK, 1/4" ID BLACK
9			
8	W019	15.00	WIRE, BUSS, SOFT DRAWN, 24 GAGE
7	WT26	6.00	HEAT SHRINK, TYPE SST-7, 1/4" ID, BLACK
6	WT07	2.00	HEAT SHRINK, 3/64" ID, BLACK
5	WT05	.50	HEAT SHRINK, 3/16" ID, BLACK
4	PT42	1	TERMINAL, LOCKWASHER, #4
3			
2	PA309B	1	CONN, 20-PIN, SR, HEADER, RA, .100 CTRS.
1	HE52	1	DISPLAY, LCD MODULE (240 X 128)

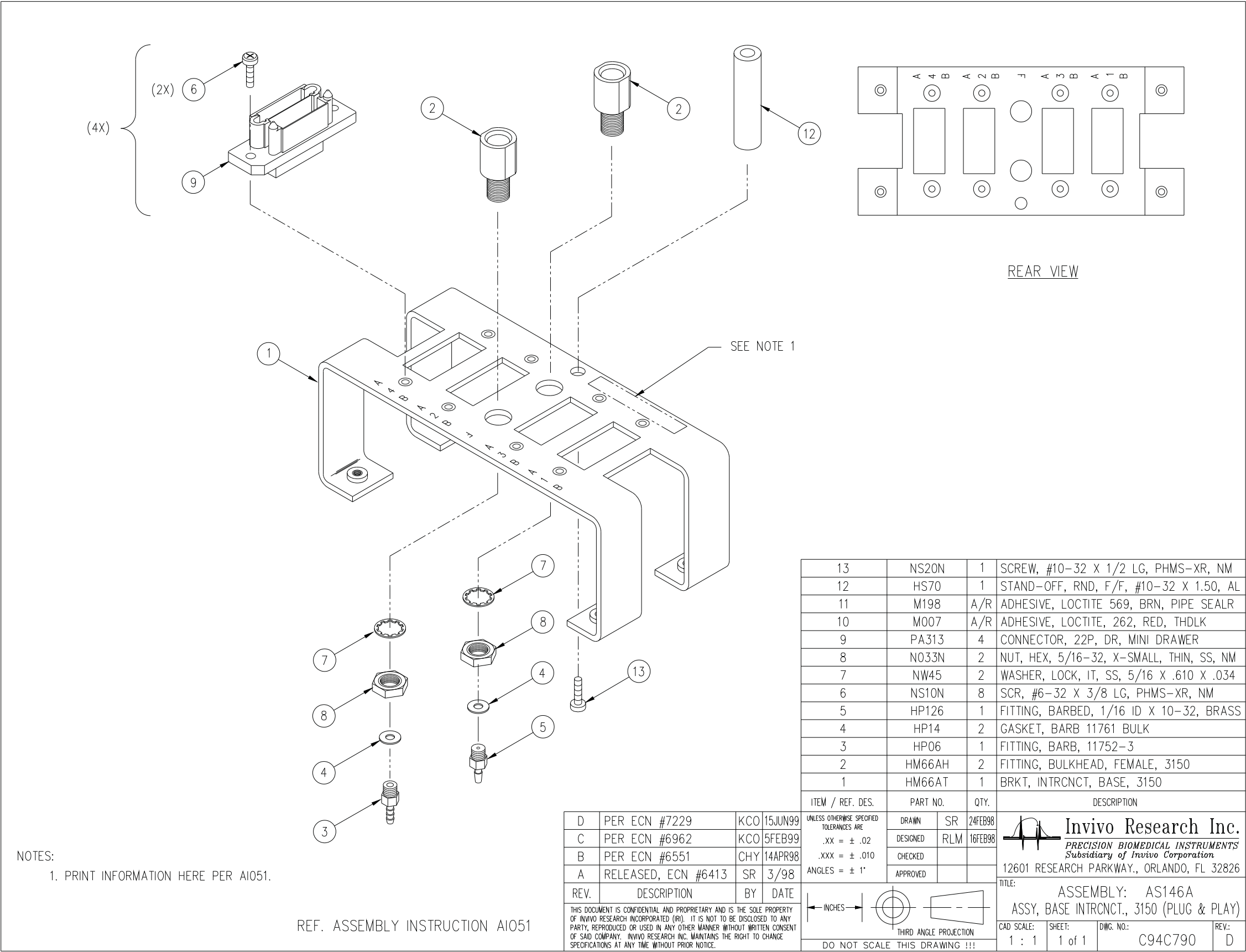
ITEM / REF. DES.	PART NO.		QTY.	DESCRIPTION
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE .XX = ± .06 .XXX = ± ____ ANGLES = ± ____	DRAWN	RHK	2/28/96	 Invivo Research Inc. <i>PRECISION BIOMEDICAL INSTRUMENTS</i> 12601 RESEARCH PARKWAY., ORLANDO, FL 32826
	DESIGNED	RHK	2/28/96	
	CHECKED			
	APPROVED			

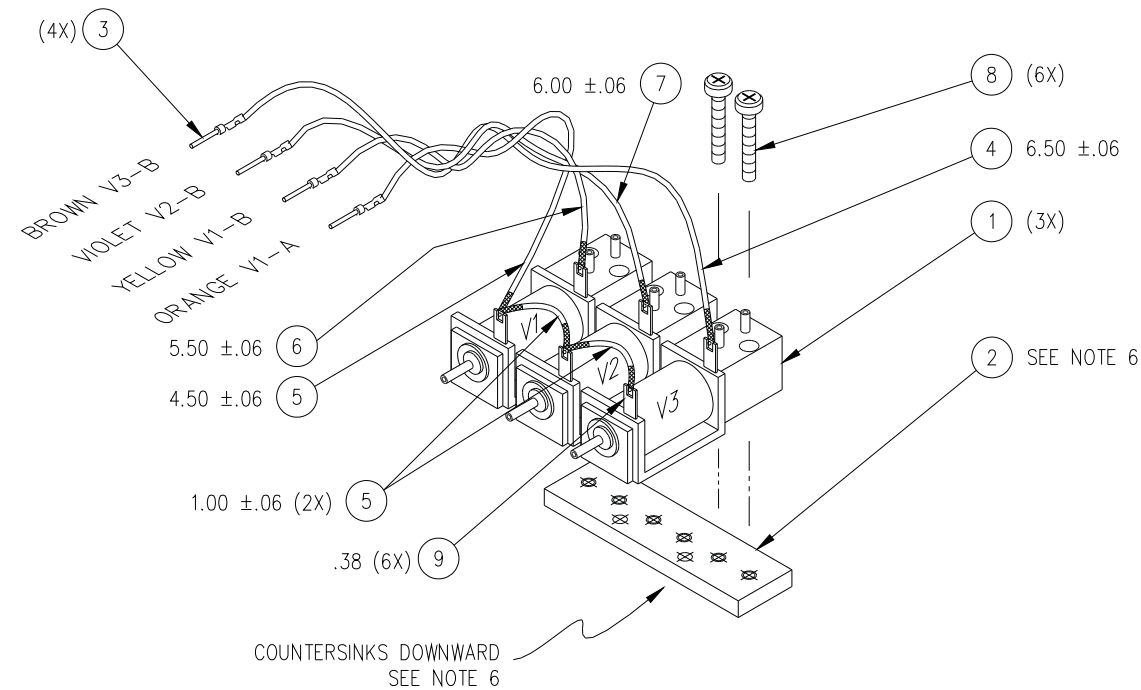
E	SEE SHEET 1.	---	---
REV.	DESCRIPTION	BY	DATE
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TITLE ASSEMBLY: AB98B PCA, LCD MODULE, 3150 MRI			
CAD SCALE NONE	SHEET 2 OF 2	DWG. NO. C94C710	REV. E





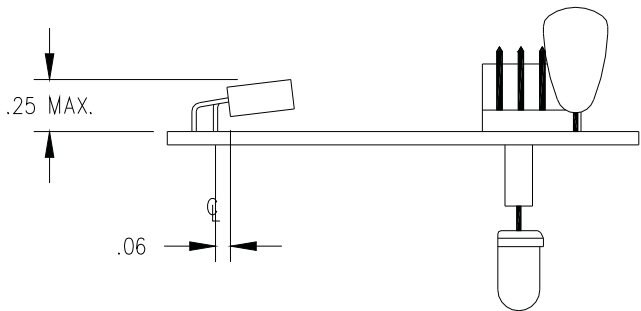
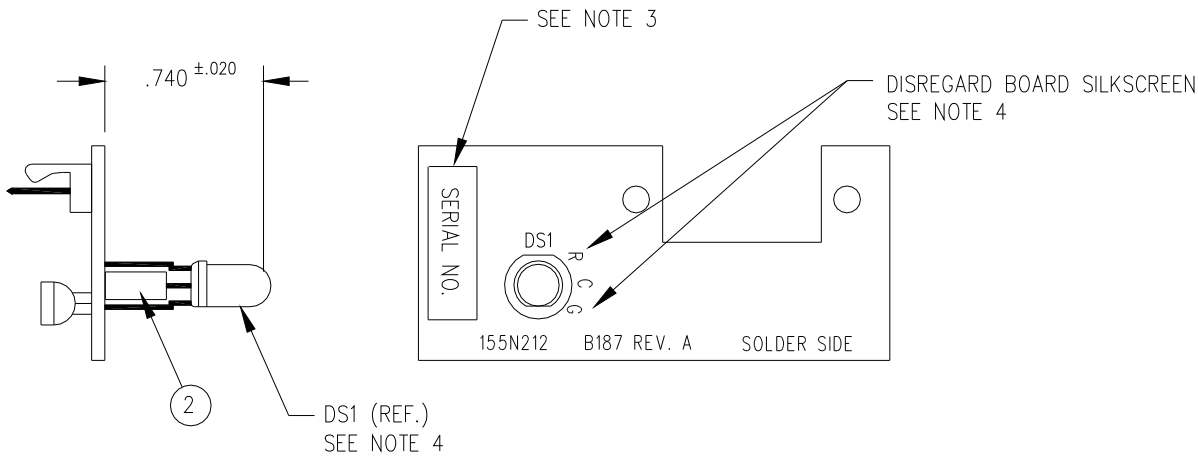
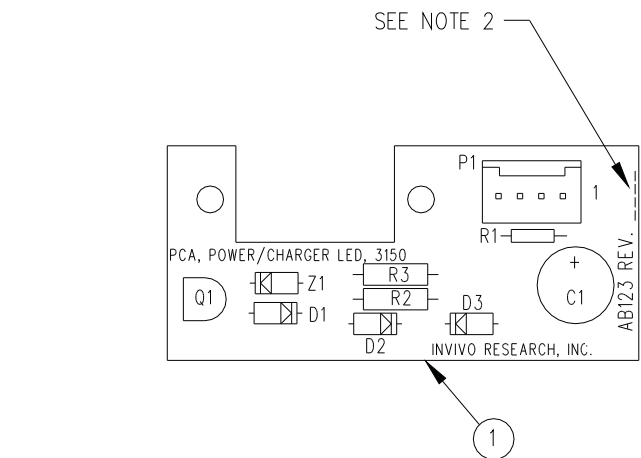


NOTES:

- CUT WIRES (ITEMS 4-7) TO LENGTHS SHOWN.
- STRIP & TIN (2) 1.00 LONG PIECES OF P/N W035 BRN WIRE (ITEM 4) .25 ON BOTH ENDS.
- STRIP ALL REMAINING WIRES FOR P/N PA243 CONTACTS (ITEM 3) PER AI046 ON ONE END.
STRIP & TIN .25 ON THE OTHER END.
- CRIMP PA243 CONTACTS ON UNTINNED END OF EACH WIRE.
- ROUTE TO INSPECTION.
- MOUNT P/N HP88A VALVES (ITEM 1) TO P/N HM66W MOUNTING BLOCK, (ITEM 2) USING (6) P/N NS41N SCREWS (ITEM 8).
NOTE: ORIENTATION OF COUNTERSINKS ON HM66W MTG. BLOCK MUST BE DOWNWARD.
- SLIDE .38 PIECE OF P/N WT01 HEAT SHRINK (ITEM 9) ONTO EACH WIRE FROM THE TINNED END.
- SOLDER ALL WIRES TO P/N HP88A VALVES AS SHOWN.
- ROUTE TO INSPECTION.
- SLIDE HEAT SHRINK OVER SOLDER JOINTS AND SHRINK IN PLACE.
- USING INDELIBLE INK OF CONTRASTING COLOR, PRINT ASSEMBLY NUMBER, REVISION, LOT NUMBER AND ASSEMBLER INITIALS ON BACK OF MOUNTING BLOCK.
- ROUTE TO INSPECTION.

REV.	DESCRIPTION	BY	DATE
B	PER ECN #8319	CHY	11MAY01
A	RELEASED, ECN #6450	RLM	27-FEB-98
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9	WT01	2.25	HEAT SHRINK, 1/8" ID, BLACK
8	NS41N	6	SCREW, #4-40 X 5/8" LG, PHMS-XR, NM
7	W048	6.00	WIRE, 26 GA., 19 X 38, VIOLET, UL-1429
6	W037	5.50	WIRE, 26 GA., 19 X 38, YELLOW, UL-1429
5	W036	6.50	WIRE, 26 GA., 19 X 38, ORANGE, UL-1429
4	W035	6.50	WIRE, 26 GA., 19 X 38, BROWN, UL-1429
3	PA243	4	CONTACT, SOCKET, 26-28 AWG, MACHINED
2	HM66W	1	MOUNTING BLOCK, PNEUMATIC VALVE, 3150
1	HP88A	3	VALVE, PNEUMATIC, 12 VDC, 10 PSI, PC MNT.
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE	DRAWN	RLM	27FEB98
.XX = ± --	DESIGNED	RLM	FEB97
.XXX = ± ---	CHECKED		
ANGLES = ± --	APPROVED		
Invivo Research Inc. PRECISION BIOMEDICAL INSTRUMENTS Subsidiary of Invivo Corporation 12601 RESEARCH PARKWAY., ORLANDO, FL 32826			
TITLE: ASSEMBLY, AP46 PNEUMATIC VALVE, ETCO2, 3150			
CAD SCALE:	SHEET:	DWG. NO.:	REV.:
1 : 1	1 of 1	C94C796	B

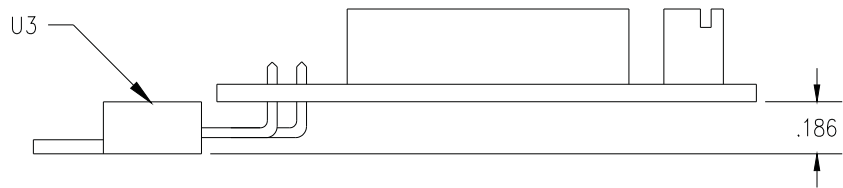
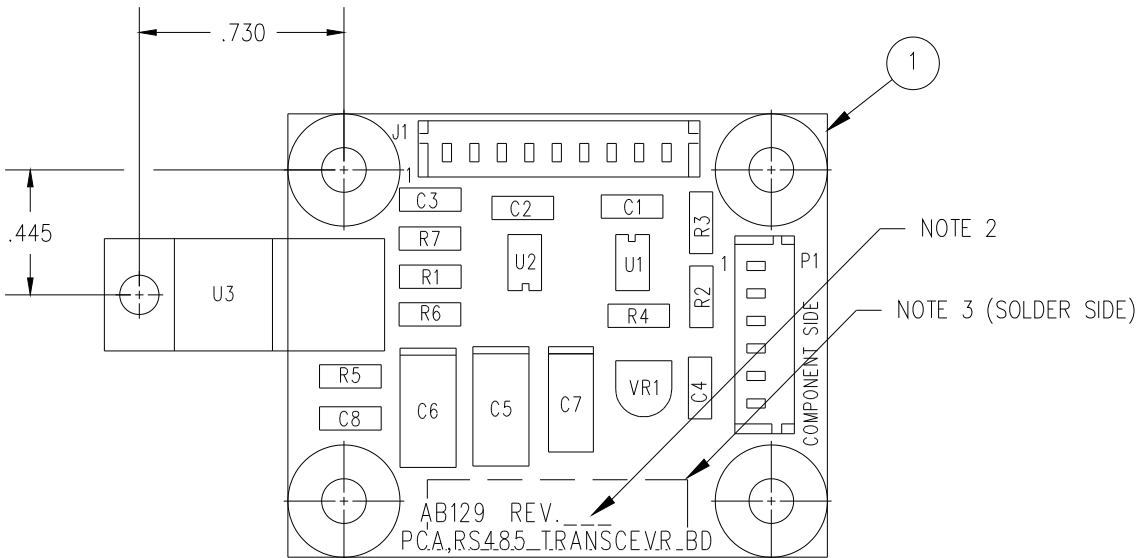


NOTES

1. WORKMANSHIP TO CONFORM TO IPC CLASS II REQUIREMENTS.
2. USING INDELIBLE INK IN CONTRASTING COLOR, PLACE CURRENT ASSEMBLY REV. IN SPACE PROVIDED.
3. BOARD REQUIRES SERIALIZED LABELING WITH THE FOLLOWING INFORMATION:
UNIQUE SERIAL NO., ASSEMBLY P/N & CURRENT REV. LEVEL.
PLACE SERIAL NUMBER LABEL IN THIS AREA-ORIENT AS SHOWN.
4. INSTALL LED DS1 PERPENDICULAR TO BOARD (±3°) ORIENTED AS SHOWN BY FLAT SIDE AND LEAD SHAPE.

C	PER ECN #8271	CHY	16MAR01
B	PER ECN #6669	CHY	30OCT98
A	RELEASED, ECN #6432	JRB	19MAR98
REV.	DESCRIPTION	BY	DATE
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2	HS19	1	SPACER, NYLON .089 X .148 X .310
R1	RF201	1	RES, 150 OHM, .125W, 1%, MF
R3	RF39	1	RES, 1.24K, .25W, 1%, MF
R2	R033	1	RES, 470 OHM, .25W, 5%, CF
Q1	Q038	1	TRANS, PNP, MPSW51
P1	PA344	1	CONN, SR, 4P, HDR, DT, LCKG, .100 CTRS
Z1	DZ08	1	ZENER, 1N52458, 15V, 500mW
DS1	DL28	1	LED, BI-COLOR, RED/GREEN, T1 3/4
D1, D2, D3	D000	3	DIODE, SIGNAL, 1N4148
C1	CT23	1	CAP, 47uF, 20%, 35V, RADIAL, TANT.
1	B187	1	PCB, POWER/CHARGER LED, 3150, REV. A
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE	DRAWN JRB	19MAR98	 Invivo Research Inc. <i>PRECISION BIOMEDICAL INSTRUMENTS</i> <i>Subsidiary of Invivo Corporation</i> 12601 RESEARCH PARKWAY, ORLANDO, FL 32826
.XX = ± .02	DESIGNED JRB	19MAR98	
.XXX = ± .010	CHECKED		
ANGLES = ± 1°	APPROVED		
REV.	DESCRIPTION	BY	DATE
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DO NOT SCALE THIS DRAWING !!!			
TITLE: ASSEMBLY: AB123 PCA, POWER/CHARGER LED, 3150			
CAD SCALE: 1 : 1	SHEET: 1 of 1	DWG. NO.: C94C799	REV.: C



NOTES:

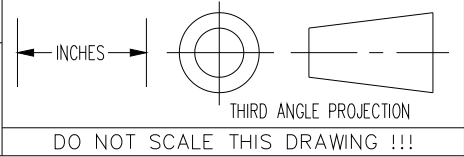
1. WORKMANSHIP TO CONFORM TO IPC CLASS II REQUIREMENTS.
2. USING INDELIBLE INK IN CONTRASTING COLOR, PLACE CURRENT ASSEMBLY REVISION IN SPACE PROVIDED.
3. BOARD REQUIRES SERIALIZED LABELING WITH THE FOLLOWING INFORMATION: UNIQUE SERIAL NO., ASSEMBLY P/N & CURRENT REV. LEVEL. PLACE SERIAL NUMBER LABEL IN THIS AREA-ORIENT AS SHOWN.

A	RELEASED, ECN #6712	SR	120CT99
REV.	DESCRIPTION	BY	DATE

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R6	RX170	1	RES, 150 OHM, .125W, 5%, 200PPM, 1206
R3,4	RX161	2	RES, 1.5K, .125W, 5%, 200PPM, 1206
R1,2	RX90	2	RES, 120 OHM, .125W, 5%, 200PPM, 1206
R7	RX77	1	RES, 680 OHM, .125W, 5%, 200PPM, 1206
R5	RX57	1	RES, 10K, .125W, 1%, 100PPM, 1206
P1	PA192	1	CONN, 6P, HDR, ST, SHRD. .098 CNTRS
J1	PA177	1	CONN, 9P, HDR, ST, SHRD. .098 CNTRS
U3	IR55	1	REGULTR, ADJUSTBL, LOW DROPOUT, LM2941C, TO-220
VR1	IR41	1	REGULATOR, POSITIVE VLTGE, LM340LAZ-5.0, TO-92
U1,2	ICX69	2	IC, RS485 TRANSCEIVER, LO-PWR, LTC1481, S08
C5	CXT08	1	CAP, 22uF, 20%, 16V, 7343 TANTALUM
C6	CXT05	1	CAP, 10uF, 20%, 35V, 7343 TANTALUM
C7	CXT04	1	CAP, 1uF, 20%, 35V, 6032 TANTALUM
C8	CX44	1	CAP, 33uF, +30%, -20%, Y5V, 50V, 1206
C1-4	CX22	4	CAP, .1uF, 10%, 50V, X7R, 1206
1	B194	1	PCB, RS485 TRANSCEIVER BOARD, REV. A

ITEM / REF. DES.	PART NO.		QTY.
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE .XX = ± .02 .XXX = ± .010 ANGLES = ± 1°	DRAWN	SLCASTEL	130CT98
	DESIGNED	SLCASTEL	130CT98
	CHECKED		
	APPROVED		

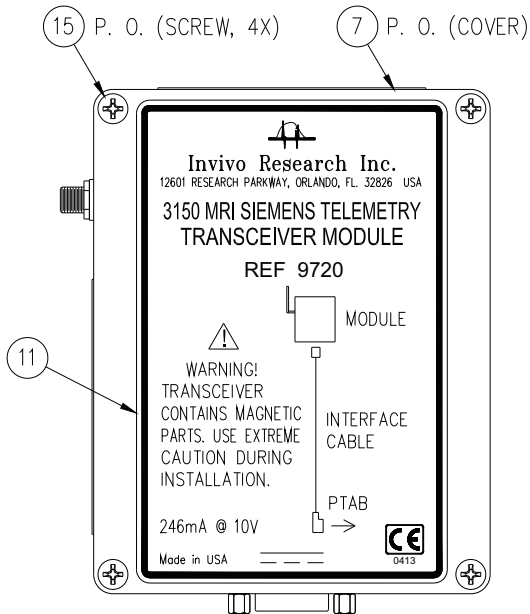
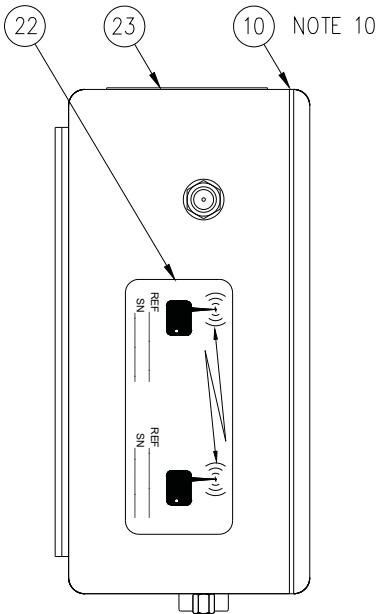
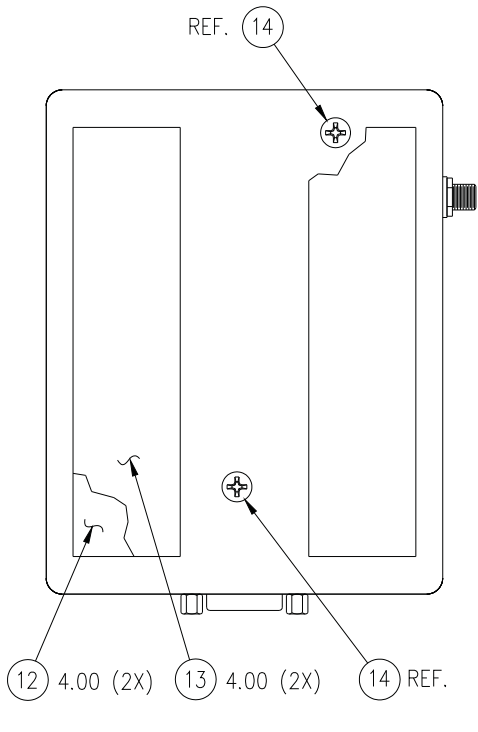
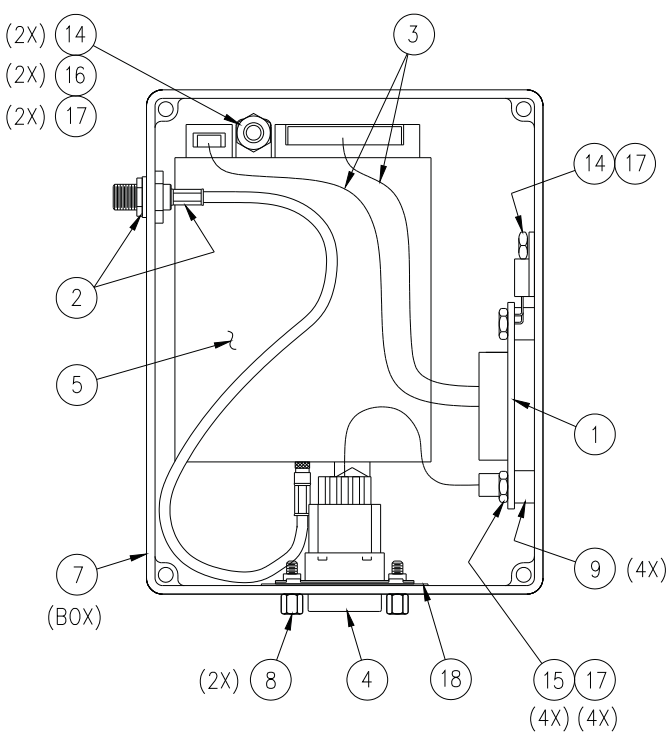


DESCRIPTION

 **Invivo Research Inc.**
PRECISION BIOMEDICAL INSTRUMENTS
Subsidiary of Invivo Corporation
12601 RESEARCH PARKWAY., ORLANDO, FL 32826

TITLE: ASSEMBLY: AB129
PCA, RS485 TRANSCEIVER BOARD

CAD SCALE: 2 : 1	SHEET: 1 of 1	DWG. NO.: C94C819	REV.: A
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NOTES:

1. APPLY P/N M050 LOCTITE (REF.) TO METAL THREADS UNLESS OTHERWISE NOTED.
2. INSTALL P/N AB129 RS485 PCA (ITEM 1) USING FOUR EACH, P/N NS111N SCREW (ITEM 15), P/N HS68 SPACER (ITEM 9), ONE P/N NS19 SCREW (ITEM 14), AND FIVE P/N N001N NUT (ITEM 17) LOCATED AS SHOWN.
3. INSTALL P/N HE60 TRANSCEIVER (ITEM 5) USING TWO EACH, P/N NS19 SCREW (ITEM 14), P/N NW01 LOCKWASHER (ITEM 16), AND P/N N001N NUT (ITEM 17) LOCATED AS SHOWN.
4. INSTALL P/N AC331 ANTENNA CABLE (ITEM 2) USING THE INCLUDED HARDWARE AND PLUG INTO TRANSCEIVER (ITEM 5).
5. INSTALL 9 PIN CONNECTOR OF P/N AC378 POWER CABLE (ITEM 4) AND P/N PA202 GASKET (ITEM 18) AT LOCATION SHOWN, USING TWO P/N HS28 SCREWLOCK (ITEM 8) AND PLUG 6 PIN CONNECTOR INTO MATING HOUSING ON PCA (ITEM 1).
6. PLUG CONNECTORS OF P/N AC376 TRANSCEIVER CABLE (ITEM 3) INTO MATING HOUSINGS OF TRANSCEIVER (ITEM 5) AND PCA (ITEM 1).
7. REMOVE BACKING FROM TWO 4.00 INCH LONG PIECES OF P/N M031 HOOK FASTENER (ITEM 12) AND ATTACH TO BOTTOM OF P/N HM76 BOX (ITEM 7), POSITIONED AS SHOWN.
8. ATTACH ONE 4.00 INCH LONG PIECE OF P/N M032 LOOP FASTENER (ITEM 13) TO EACH PIECE OF HOOK FASTENER (ITEM 12) AS SHOWN. DO NOT REMOVE BACKING
9. APPLY ONE CONTINUOUS STRIP OF P/N H120 EMI GASKET (ITEM 10) ALONG THE OUTER LIP ON THE INSIDE OF THE COVER.
10. ATTACH P/N L199 LABEL (ITEM 23) TO SIDE OF BOX (ITEM 7), CENTERED IN AREA, ENSURING LABEL IS ORIENTED AS SHOWN.
11. ATTACH P/N L1016C LABEL (ITEM 23) TO END OF BOX (ITEM 7), CENTERED IN AREA, WITH TOP OF LABEL TOWARD BOTTOM OF BOX.
12. ATTACH P/N L2071 LABEL (ITEM 11) TO COVER, CENTERED, ENSURING LABEL IS ORIENTED AS SHOWN.
13. ROUTE TO INSPECTION. PROTECT PARTS TO AVOID DAMAGE.
14. SECURE COVER TO BOX USING FOUR SCREWS (ITEM 15).
15. PLACE P/N HE61 ANTENNA (ITEM 6) AND TRANSCEIVER ASSEMBLY, EACH IN A P/N M130 BUBBLE BAG (ITEM 20).
16. PLACE THE BAGGED ANTENNA IN P/N M184 SNAP-SEAL TUBE (ITEM 21).
17. PLACE TRANSCEIVER ASSEMBLY AND ANTENNA IN P/N M001D BAG (ITEM 19) AND ATTACH P/N L131 LABEL (ITEM 24) TO BAG.
18. ROUTE TO INSPECTION.

(NOT SHOWN)

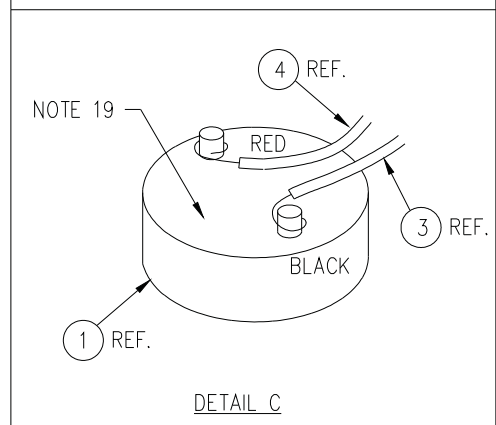
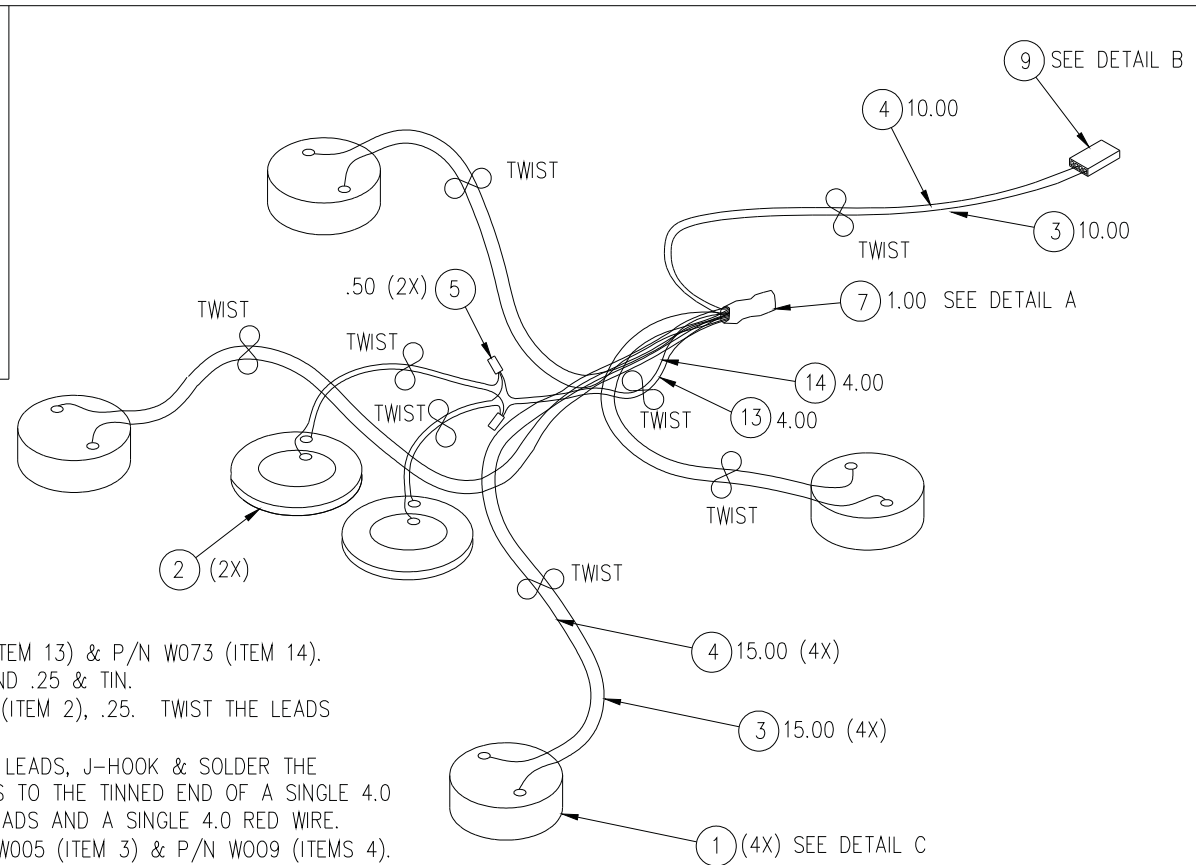
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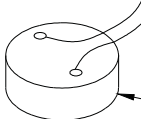
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(NOT SHOWN)

A	RELEASED, ECN #7195	SR	9MAR00
REV.	DESCRIPTION	BY	DATE
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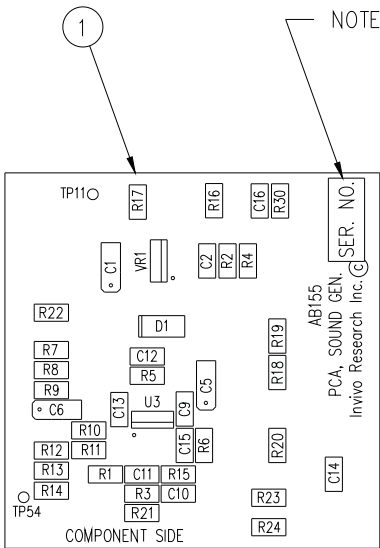
24	L131	REF.	LABEL, I.D., COMPUTER PRINTED
23	L1016C	1	LABEL, MODEL/SERIAL, GENERIC
22	L199	1	LABEL, TELECOMMUNICATION LINK
21	M184	1	TUBE, SNAP-SEAL, 1.00 I.D. X 9.00 LG.
20	M130	2	BBL. BAG, ANTI-STATIC, 8 X 11.5
19	M001D	1	BAG, ZIPLOCK, 10 X 13 X 2.0 MIL
18	PA202	1	GASKET, EMI/RFI, 9 PIN CONNECTOR
17	N001N	7	NUT, HEX, #6-32, SS, NM
16	NW01	2	LOKWSHR, IT, SS, #6 X .285 X .040
15	NS111N	8	SCREW, #6-32 X 1/2 LG. FHMS-XR, NM, BO
14	NS19	3	SCREW, #6-32 X 3/8 LG. FHMS-XR, SS
13	M032	8.00	FASTENER, LOOP, BLACK, 1" WIDE
12	M031	8.00	FASTENER, HOOK, BLACK, 1" WIDE
11	L2071	1	LABEL, TRANSCEIVER MODULE, SIEMENS
10	H120	17.00	GASKET, EMI, .157H X .039W, PSA
9	HS68	4	SPACER, .312 OD X .166 ID X .188
8	HS28N	2	SCREWLOCK, FEMALE, #4-40 X .312 LG., NM
7	HM74	1	BOX, MODIFIED, TRANSCEIVER, SIEMENS
6	HE61	1	ANTENNA, 2.4 GHZ, RIGHT ANGLE
5	HE60	1	TRANSCEIVER, 2.4 GHZ, 115200 BPS
4	AC378	1	CABLE, RS485 POWER, SIEMENS
3	AC376	1	CABLE, TRANSCEIVER POWER
2	AC331	1	CAB, ANTENNA, TELEMETRY, 8 IN.
1	AB129	1	PCA, RS485 TRANSCEIVER BOARD
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE	DRAWN	SR	2MAR99
.XX = ± .02	DESIGNED	SLC	15OCT98
.XXX = ± .010	CHECKED		
ANGLES = ± 1°	APPROVED		
Invivo Research Inc. PRECISION BIOMEDICAL INSTRUMENTS Subsidiary of Invivo Corporation 12601 RESEARCH PARKWAY., ORLANDO, FL 32826			
TITLE: ASSEMBLY: AS163 ASSY, TRANSCEIVER MODULE, SIEMENS			
CAD SCALE: 1 : 1	SHEET: 1 of 1	DWG. NO.: C94C847	REV: A



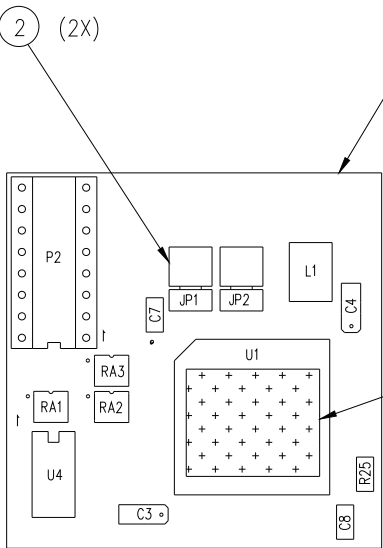
1. CUT 4.0 LENGTHS EACH OF P/N W069 (ITEM 13) & P/N W073 (ITEM 14). STRIP ONE END .50. STRIP THE OTHER END .25 & TIN.
 2. STRIP & TIN P/N HE72 SPEAKER LEADS (ITEM 2), .25. TWIST THE LEADS OF EACH SPEAKER ONE TURN PER INCH.
 3. MAINTAINING THE TWIST IN THE SPEAKER LEADS, J-HOOK & SOLDER THE BLACK LEAD FROM BOTH HE72 SPEAKERS TO THE TINNED END OF A SINGLE 4.0 BLACK WIRE. REPEAT WITH THE RED LEADS AND A SINGLE 4.0 RED WIRE.
 4. CUT FOUR 15.00 LENGTHS EACH OF P/N W005 (ITEM 3) & P/N W009 (ITEMS 4). STRIP ONE END .50. STRIP & TIN THE OTHER END .25. TWIST ONE RED AND ONE BLACK WIRE APPROX. ONE TURN PER INCH TO MAKE FOUR SEPARATE PAIRS.
 5. CUT ONE 10.00 LENGTH EACH OF P/N W005 & P/N W009. STRIP ONE END .50 & THE OTHER FOR P/N PT07 CONTACTS PER A1046.
 6. APPLY P/N PT07 CONTACTS (ITEM 10) TO THE 10.00 WIRES.
 7. ROUTE TO INSPECTION.
 8. INSERT CONTACTS & P/N PA12 KEY (ITEM 11) INTO P/N PA17 HOUSING (ITEM 9) PER DETAIL B, ENSURING CORRECT PIN-TO-WIRE MATING. TWIST WIRES APPROX. ONE TURN PER INCH, AS SHOWN.
 9. USING WHITE INDELIBLE INK OR PAINT, PUT A DOT ON THE HOUSING TO INDICATE PIN ONE AS SHOWN IN DETAIL B.
 10. PREP P/N R036 RESISTOR (ITEM 8) BY APPLYING .75 LENGTH OF P/N WT04 (ITEM 5) PER DETAIL A.
 11. APPLY .50 LENGTH OF P/N WT04 HEAT SHRINK (ITEM 5) TO THE J-HOOKED HE72 SPEAKER WIRES. MAINTAIN TWISTED WIRE APPROXIMATELY ONE TURN PER INCH ALONG ENTIRE LENGTH.
 12. TWIST ALL .50 ENDS OF BLACK WIRES TOGETHER ALONG WITH RESISTOR LEAD PER DETAIL A. KEEP WIRE INSULATION EVEN. SOLDER THE WIRES AND TRIM TO APPROX. .38.
 13. TWIST ALL .50 ENDS OF RED WIRES TOGETHER ALONG WITH RESISTOR LEAD PER DETAIL A. KEEP WIRE INSULATION EVEN. SOLDER THE WIRES AND TRIM TO APPROX. .38.
 14. ROUTE TO INSPECTION.
 15. APPLY APPROX. .50 LENGTHS OF P/N WT05 HEAT SHRINK (ITEM 6) TO THE WIRE BUNDLES TO COVER THE SOLDER JOINT.
 16. APPLY APPROX. 1.00 LENGTH OF P/N WT09 HEAT SHRINK (ITEM 7) TO COVER BOTH WIRE BUNDLES AND RESISTOR PER DETAIL A.
 17. SOLDER 15.00 WIRES TO P/N HE71 SPEAKERS (ITEM 1) PER DETAIL C.
 18. USING A SMALL LABEL OR INDELIBLE INK OF CONTRASTING COLOR, PRINT ASSY. NO., REVISION, LOT NO., & ASSEMBLER INITIALS ON ONE HE71 SPEAKER.
 19. PRINT P/N L057 LABEL (ITEM 12) WITH INFORMATION SHOWN IN DETAIL B & PLACE AS SHOWN.
 20. REMOVE LABEL COVERING HOLE ON BOTTOM OF P/N HE71 SPEAKER.
 21. PACKAGE SPEAKER ASSY. TO AVOID ENTANGLEMENT OF WIRES & ROUTE TO INSPECTION.
- 
- | | |
|------|-----|
| | |
| | |
| B | PER |
| A | REL |
| REV. | |
- THIS DOCUMENT IS OF INVIVO RESEARCH PROPERTY. REPRODUCTION IS PROHIBITED.

14	W073	4.00	#28 AWG, STD, 7/36, RED, UL-1429
13	W069	4.00	#28 AWG, STD, 7/36, BLK, UL-1429
12	L057	1	LABEL, SELF-LAMINATING
11	PA12	1	KEY PLUG (.10)
10	PT07	2	CNTCT., LKG. CLIP, 26-22 AWG, REEL
9	PA17	1	HOUSING, SR, 4 PIN (.10)
8	R036	1	RES., 220 OHM, .25W, 5%, CF
7	WT09	1.00	HEAT SHRINK, 3/8 ID BLACK
6	WT05	1.00	HEAT SHRINK, 3/16 ID BLACK
5	WT04	1.75	HEAT SHRINK, 3/32 ID BLACK
4	W009	70.00	#22 AWG, 19 X 34, RED, UL-1429
3	W005	70.00	#22 AWG, 19 X 34, BLK, UL-1429
2	HE72	2	SPEAKER, PIEZO CER., 85 DB, 500-20K
1	HE71	4	SPEAKER, PIEZO, CER., 80 DB, 1.3KHZ

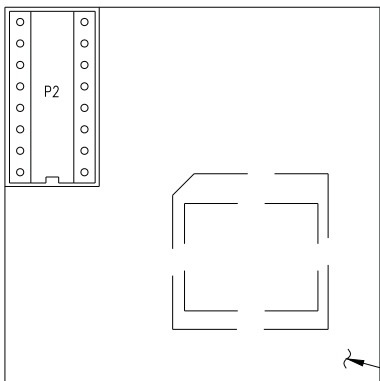
ITEM / REF. DES.		PART NO.		QTY.	DESCRIPTION			
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE .XX = ± .02 .XXX = ± .010 ANGLES = ± 1°		DRAWN	KCO	16/JUN00		Invivo Research Inc. <i>PRECISION BIOMEDICAL INSTRUMENTS</i> <i>Subsidiary of Invivo Corporation</i> 12601 RESEARCH PARKWAY., ORLANDO, FL 32826		
		DESIGNED	KCO	16/JUN00				
		CHECKED						
		APPROVED						
					TITLE:	ASSEMBLY: AS170 ASSY, SPEAKER HARNESS, 3150		
					CAD SCALE:	SHEET:	DWG. NO:	REV:
DO NOT SCALE THIS DRAWING !!!					1 : 1	1 of 1	C94C865	B



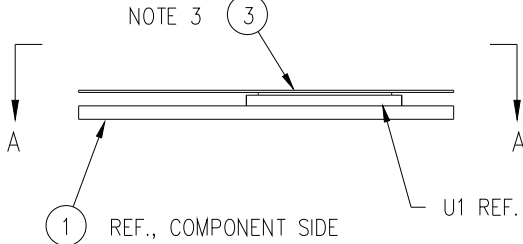
COMPONENT SIDE



SOLDER SIDE



VIEW A-A

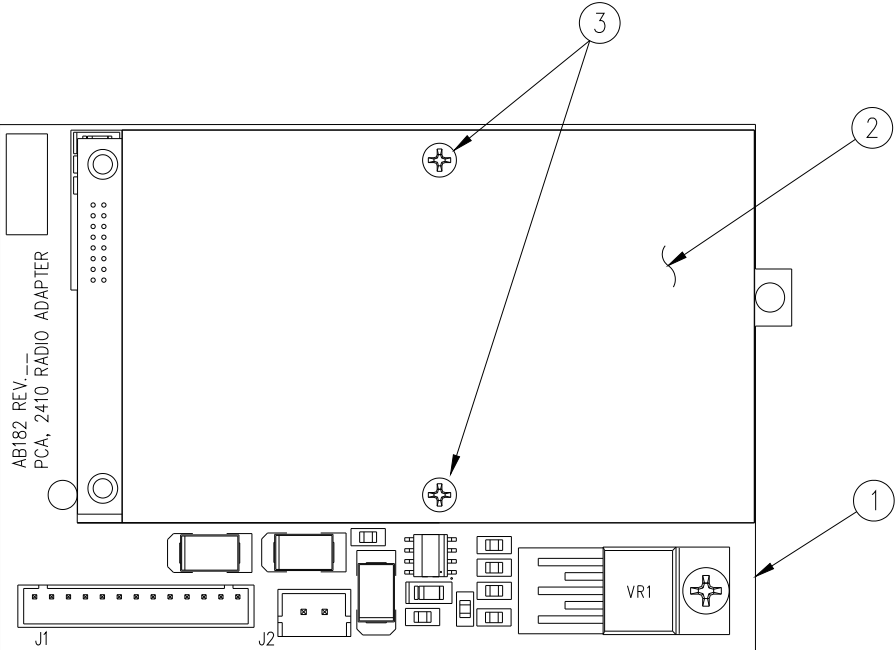


NOTES

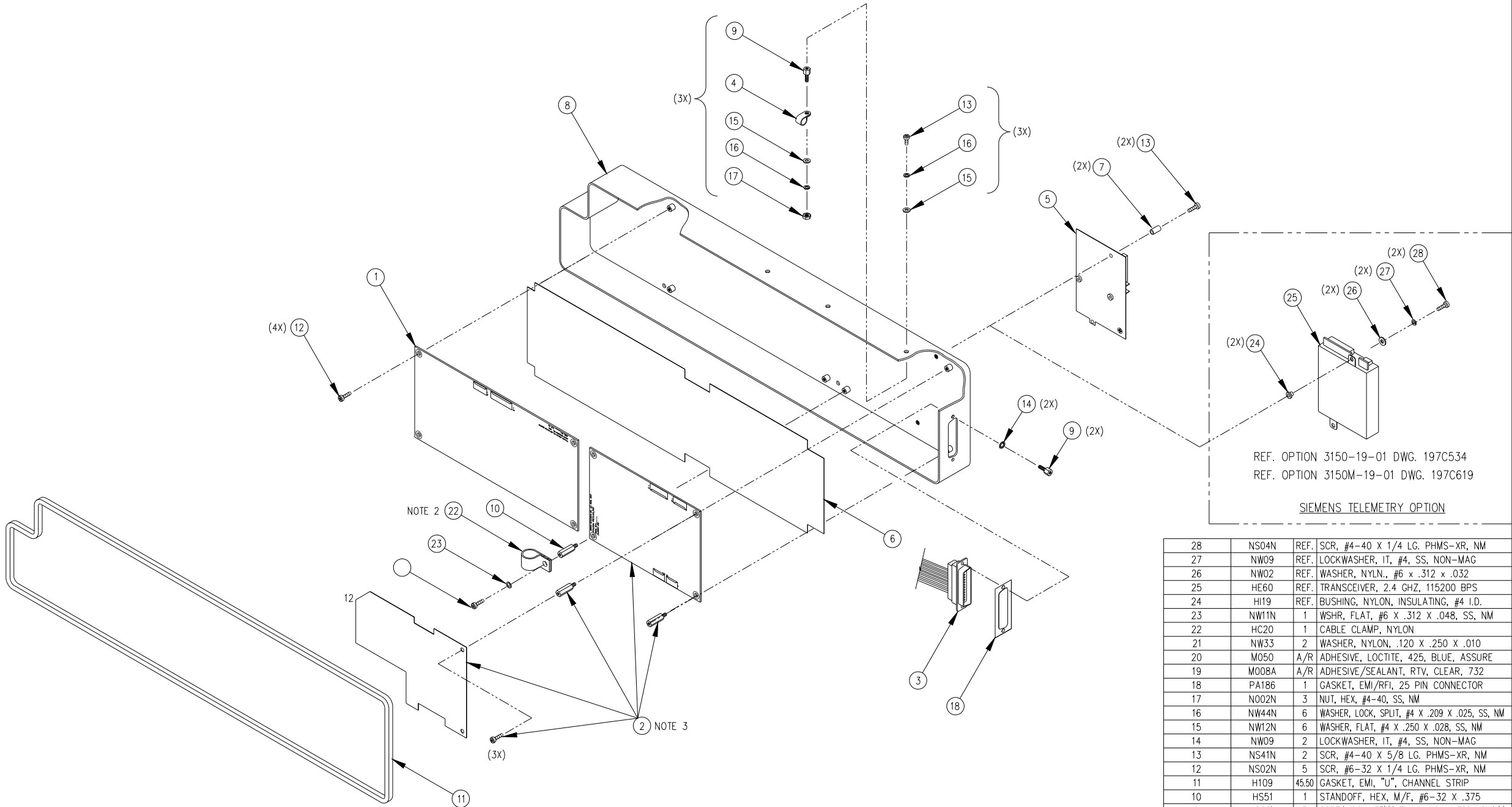
1. WORKMANSHIP TO CONFORM TO IPC CLASS II REQUIREMENTS.
2. BOARD REQUIRES SERIALIZED LABELING WITH THE FOLLOWING INFORMATION:
UNIQUE SERIAL NO., ASSEMBLY P/N & CURRENT REV. LEVEL.
PLACE SERIAL NUMBER LABEL IN THIS AREA, ORIENT AS SHOWN.
3. APPLY A .75 LENGTH OF P/N M000 DOUBLE SIDED FOAM TAPE (ITEM 4)
TO P/N ICX90 IC (REF. DES. U1). ATTACH P/N HI62 FIBERGLASS
INSULATOR (ITEM 3) TO THE TAPE ON U1 AS SHOWN IN VIEW A-A.

D	PER ECN #8304	CHY	19APR01
C	PER ECN #8279	CHY	29MAR01
B	PER ECN #8208	JRS	9FEB01
A	RELEASE PER ECN #7921	ALH	23JAN01
REV.	DESCRIPTION	BY	DATE
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4	M000	.75	TAPE, OPN. CL. FOAM, DS, .06 THK. x .38 W		
3	HI62	1	INSULATOR, SOUND GENERATOR MOD PCA		
2	PA66	2	SHUNT, 2 POSITION, .10 CTRS.		
JP1, JP2	PA41	2	HEADER, 2P, SR, RA, .10 CTRS.		
L1	TX01	1	INDUCTOR, 100UH, 100MA, SMT		
R14	RX356	1	RES., 1.3MEG, 1%, .10W, 100PPM, 0805		
R13	RX355	1	RES., 649K, 1%, .10W, 100PPM, 0805		
R11	RX354	1	RES., 162K, 1%, .10W, 100PPM, 0805		
R10	RX353	1	RES., 80.6K, 1%, .10W, 100PPM, 0805		
R9	RX352	1	RES., 40.2K, 1%, .10W, 100PPM, 0805		
R5, R21	RX351	2	RES., 4.99K, 1%, .10W, 100PPM, 0805		
R2	RX350	1	RES., 16.9K, 1%, .10W, 100PPM, 0805		
R6	RX335	1	RES., 16.5K, 1%, .10W, 100PPM, 0805		
R12	RX322	1	RES., 324K, 1%, .10W, 100PPM, 0805		
R1	RX290	1	RES., 133K, 1%, .10W, 100PPM, 0805		
R4,7,16,17, 18,20,22	RX250	7	RES., 10K, 1%, .10W, 100PPM, 0805		
R15,19,23, 24,25,30	RX243	6	RES., 1K, 1%, .10W, 100PPM, 0805		
R8	RX236	1	RES., 20K, 1%, .10W, 100PPM, 0805		
R3	RX232	1	RES., 200K, 1%, .10W, 100PPM, 0805		
RA1-3	RS20	3	RES., ARRAY, 100 OHM		
P2	PA430	1	HEADER, DUAL INLINE, ADAPTER, DIP-16		
VR1	IRX03	1	IC, ADJ., MICROPWR, VOLT. REG., 2951		
U3	ILX22	1	IC, OP-AMP, DUAL LO-P, LM6142AIM		
U1	ICX90	1	IC, PLD, EP1K30, 144PIN, TQFP		
U4	AM68	1	IC, CONFIGURATION DEVICE, EPC1, DIP-8		
D1	DDX01	1	DIODE, SIGNAL, LEADLESS, MELF, 500MW		
C1, 3-6	CXT19	5	CAP., 4.7UF, 10%, 16V, TANT., 3216		
C16	CX82	1	CAP., 1000PF, 5%, 50V, X7R, 0805		
C12	CX81	1	CAP., 22PF, 5%, 50V, X7R, 0805		
C15	CX69	1	CAP., 100PF, 10%, 50V, COG, 0805		
C2	CX59	1	CAP., .01UF, 10%, 50V, X7R, 0805		
C7-11,13,14	CX51	7	CAP., .1UF, 10%, 50V, X7R, 0805		
1	B209	1	PCB, SOUND GENERATOR MODULE REV-B		
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION		
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE .XX = ± .XXX = ± ANGLES = ±	DRAWN	ALH	 Invivo Research Inc. <i>PRECISION BIOMEDICAL INSTRUMENTS</i> <i>Subsidiary of Invivo Corporation</i> 12601 RESEARCH PARKWAY., ORLANDO, FL 32826		
	DESIGNED	SF			
	CHECKED				
	APPROVED				
 THIRD ANGLE PROJECTION			TITLE: ASSEMBLY: AB155 PCA, SOUND GENERATOR MODULE		
DO NOT SCALE THIS DRAWING !!!		CAD SCALE: 1 : 1	SHEET: 1 of 1	DWG. NO.: C94C870	REV.: D



				3	NS148N	2	SCR., #2-56 x 7/16 LG., PHMS-XR, SS, NM
				2	HE97	1	TRANSCIVER, 2.4 GHZ, 460 KBPS
				1	AB182	1	PCA, 2410 RADIO ADAPTER
				ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
				UNLESS OTHERWISE SPECIFIED TOLERANCES ARE	DRAWN	CHY	23OCT01
				.XX = ± .02	DESIGNED	SLC	23OCT01
				.XXX = ± .010	CHECKED		
				ANGLES = ± 1°	APPROVED		
A	RELEASED, ECN #8394	CHY	23OCT01	12601 RESEARCH PARKWAY., ORLANDO, FL 32826  INVIVO RESEARCH, INC. 12601 RESEARCH PARKWAY., ORLANDO, FL 32826			
REV.	DESCRIPTION	BY	DATE				
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				CAD SCALE:	SHEET:	DWG. NO.:	REV.:
				1 : 1	1 of 1	C94C926	A



REF. OPTION 3150-19-01 DWG. 197C534
REF. OPTION 3150M-19-01 DWG. 197C619

SIEMENS TELEMETRY OPTION

28	NS04N	REF.	SCR, #4-40 X 1/4 LG. PHMS-XR, NM
27	NW09	REF.	LOCKWASHER, IT, #4, SS, NON-MAG
26	NW02	REF.	WASHER, NYLN., #6 X .312 X .032
25	HE60	REF.	TRANSCIEIVER, 2.4 GHZ, 115200 BPS
24	HI19	REF.	BUSHING, NYLON, INSULATING, #4 I.D.
23	NW11N	1	WSHR, FLAT, #6 X .312 X .048, SS, NM
22	HC20	1	CABLE CLAMP, NYLON
21	NW33	2	WASHER, NYLON, .120 X .250 X .010
20	MO50	A/R	ADHESIVE, LOCTITE, 425, BLUE, ASSURE
19	MO08A	A/R	ADHESIVE/SEALANT, RTV, CLEAR, 732
18	PA186	1	GASKET, EMI/RFI, 25 PIN CONNECTOR
17	N002N	3	NUT, HEX, #4-40, SS, NM
16	NW44N	6	WASHER, LOCK, SPLIT, #4 X .209 X .025, SS, NM
15	NW12N	6	WASHER, FLAT, #4 X .250 X .028, SS, NM
14	NW09	2	LOCKWASHER, IT, #4, SS, NON-MAG
13	NS41N	2	SCR, #4-40 X 5/8 LG. PHMS-XR, NM
12	NS02N	5	SCR, #6-32 X 1/4 LG. PHMS-XR, NM
11	H109	45.50	GASKET, EMI, "U", CHANNEL STRIP
10	HS51	1	STANDOFF, HEX, M/F, #6-32 X .375
9	HS28N	5	SCREWLOCK, FEMALE, #4-40 X .312 LG, NM
8	HM66F	1	COVER, ISO BD'S, 3150
7	HS25	2	SPACER, NYLON, ROUND, #4 X .360
6	HI48	1	INSULATOR, ECG/PRESS. ISO
5	AB182B	1	ASSY, 2410 RADIO PCA
4	HC01	3	CLAMP 1/4" NX2
3	AC306	1	CAB, ECG/PRESS. ISO, 3150
2	3154-1	REF.	INVASIVE PRESSURE, OPTION 1
1	AB86	1	PCA, ECG ANALOG ISO, MRI, PHYSIO

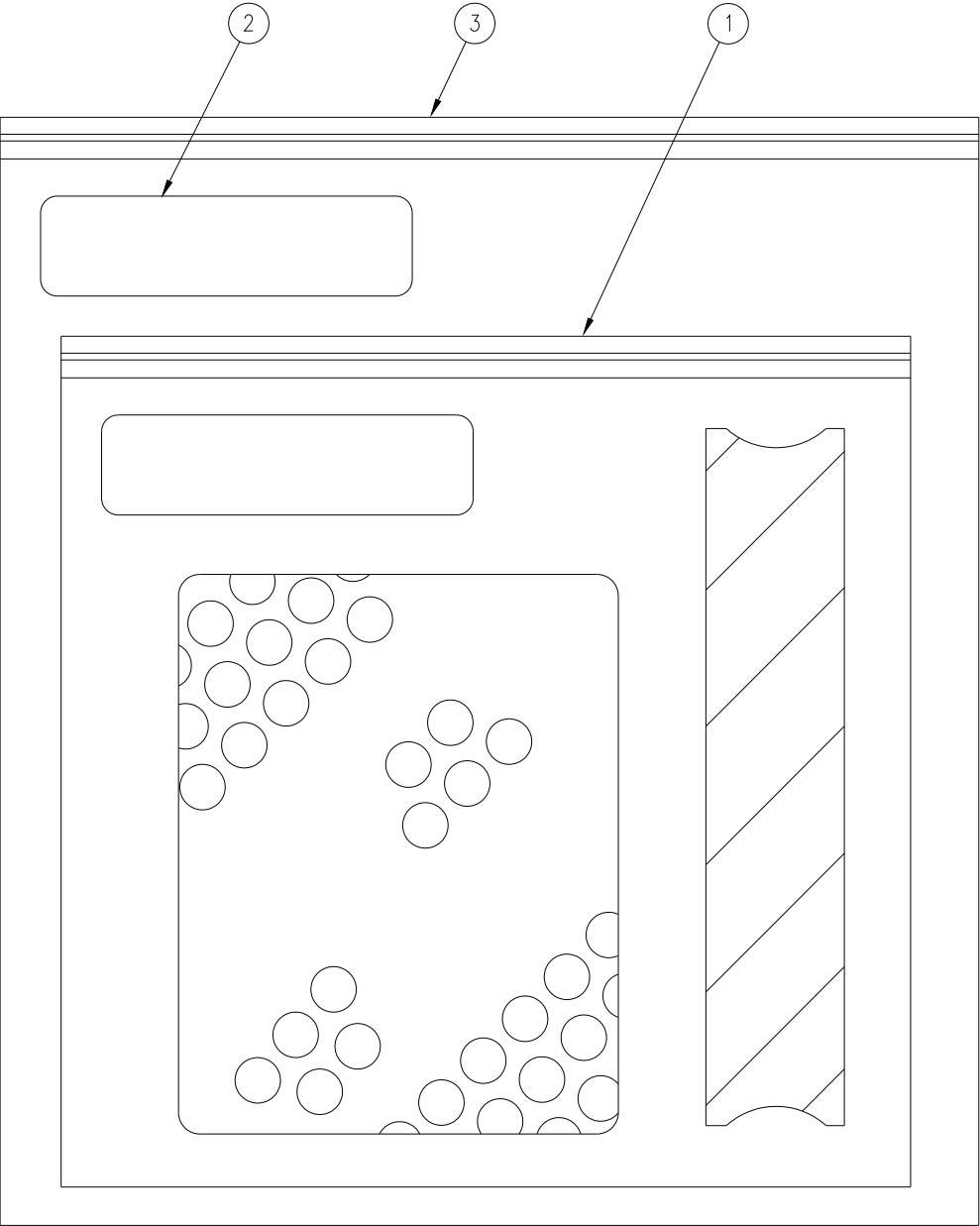
NOTES:

1. SECURE P/N H109 GASKET (ITEM 11) TO THE P/N HM68F COVER (ITEM 8) WITH P/N M008A RTV (ITEM 19) AT EACH CORNER, AT ENDS, AND AT SEVERAL LOCATIONS ALONG ITS LENGTH. DO NOT GET ADHESIVE INTO BOTTOM OF "U" CHANNEL IN THE GASKET.
2. SECURE TWO AC317 CABLES (FROM AS150 PATIENT PANEL) WITH P/N HC20, CABLE CLAMP (ITEM 22) AS SHOWN.
3. INSTALL AB89 INVASIVE PRESSURE ISO BOARD ASSY. & ASSOCIATED PARTS WHEN REQUIRED. SEE MODEL 3150 ASSEMBLY DRAWING 197C534 FOR REFERENCE.

REF. ASSEMBLY INSTRUCTION AI050
REF. INTERCONNECT DIAGRAM C90D056

				D	PER ECN	#6799M	KCO 1SEP98
				C	PER ECN	#6440	CHY 10MAR98
				B	PER ECN	#6307	SR 14JAN98
				A	RELEASED	ECN #5812	SR NOV97
				REV.	DESCRIPTION		BY DATE
				E	PER ECN	#6918M	CHY 5NOV98
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REV.	DESCRIPTION		BY	DATE			

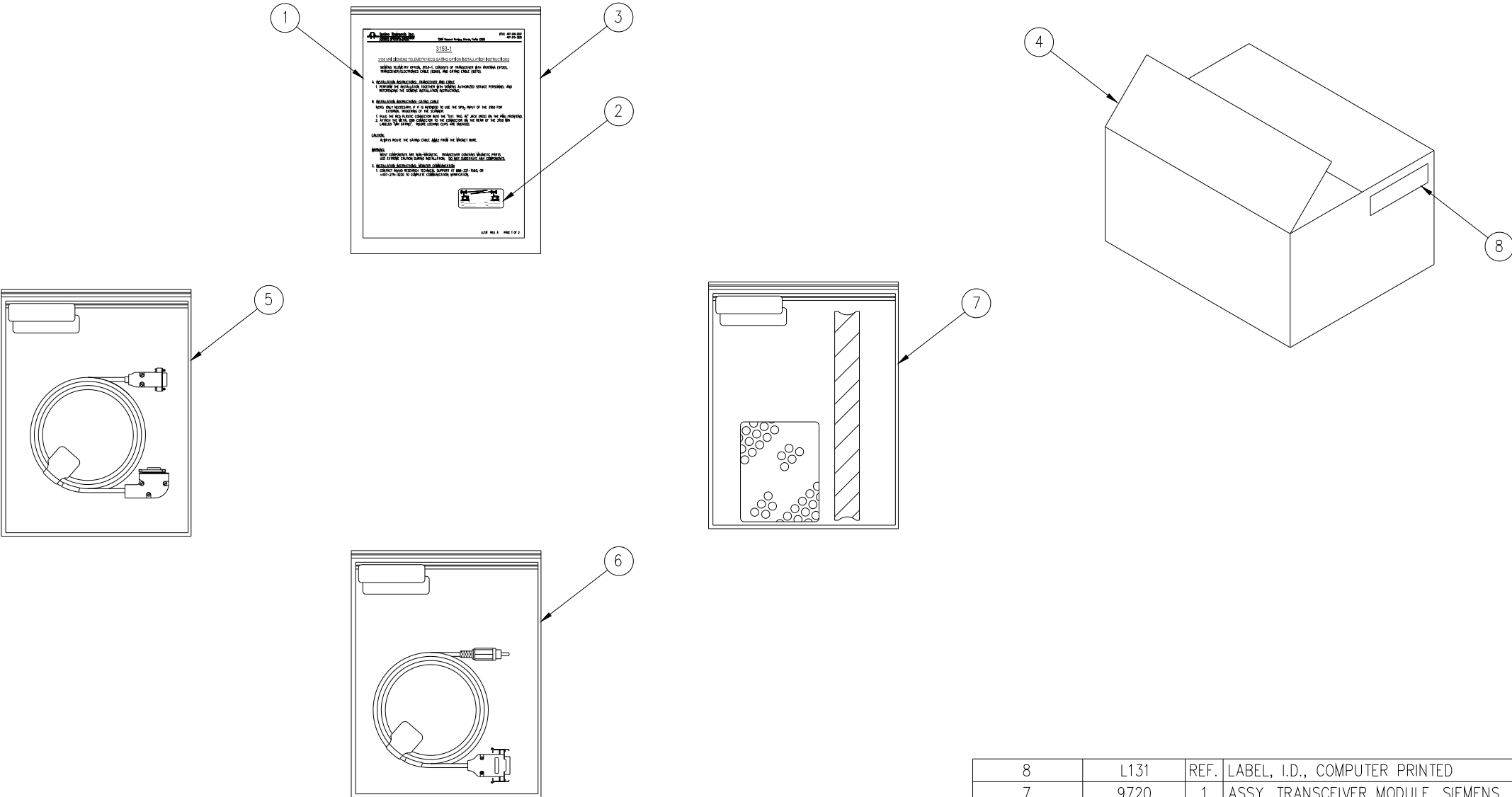
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE: .XX = ± .XXX = ± ANGLES = ±	DRAWN	SR	30JUL97	 Invivo Research Inc. <i>PRECISION BIOMEDICAL INSTRUMENTS</i> Subsidiary of Invivo Corporation 12601 RESEARCH PARKWAY., ORLANDO, FL 32826			
	DESIGNED	RLM	3JAN97				
	CHECKED						
	APPROVED						
THIRD ANGLE PROJECTION				TITLE: ASSEMBLY: AS149 ASSY, ISO BD.S COVER, 3150			
DO NOT SCALE THIS DRAWING !!!				CAD SCALE: 1 : 1	SHEET: 1 of 1	DWG. NO.: C94D769	REV.: H



- NOTES:
- 1. PLACE P/N AS163 TRANSCIVER MODULE AND ANTENNA (ITEM 1) IN P/N M001D BAG (ITEM 3) AND ATTACH P/N L131 LABEL (ITEM 2) TO BAG.
 - 2. ROUTE TO INSPECTION.

A	RELEASED, ECN #7195	SR	9MAR00
REV.	DESCRIPTION	BY	DATE
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3	M001D	1	BAG, ZIPLOCK, 10 X 13 X 2.0 MIL
2	L131	REF.	LABEL, I.D., COMPUTER PRINTED
1	AS163	1	ASSY, TRANSCIVER MODULE, SIEMENS
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE	DRAWN	SR	2MAR99
.XX = ± .02	DESIGNED	SLC	15OCT98
.XXX = ± .010	CHECKED		
ANGLES = ± 1°	APPROVED		
 Invivo Research Inc. <i>PRECISION BIOMEDICAL INSTRUMENTS</i> <i>Subsidiary of Invivo Corporation</i> 12601 RESEARCH PARKWAY., ORLANDO, FL 32826			
TITLE: ASSEMBLY: 9720 ASSY, TRANSCIVER MODULE, SIEMENS			
CAD SCALE:	SHEET:	DWG. NO.:	REV.:
1 : 1	1 of 1	C97C569	A



PACKING INSTRUCTIONS

1. PLACE P/N LL131 INSTRUCTIONS (ITEM 1) AND P/N L199 LABEL (ITEM 2) IN P/N M001D BAG (ITEM 3) AS SHOWN.
2. PLACE ALL BAGGED ITEMS IN P/N M098 BOX (ITEM 1).
3. ATTACH P/N L131 I.D. LABEL (ITEM 6) TO BOX (ITEM 1), LOCATED AS SHOWN.
4. ROUTE TO INSPECTION.

A	RELEASED, ECN #7195	SR	9MAR00
REV.	DESCRIPTION	BY	DATE
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8	L131	REF.	LABEL, I.D., COMPUTER PRINTED
7	9720	1	ASSY, TRANSCEIVER MODULE, SIEMENS
6	9270	1	CAB, GATING, 3150/PMU, SIEMENS
5	9269	1	CAB, XCVR/ELECTRONICS, SIEMENS
4	M098	1	BOX, MLTI-OPTH, 11.25 X 8.75 X 6.00
3	M001D	1	BAG, ZIPLOCK, 10 X 13 X 2.0 MIL
2	L199	1	LABEL, TELECOMMUNICATION LINK
1	LL131	1	INSTR., INSTAL., 3150 MRI SIEMENS TELEM. OPTN.
ITEM / REF. DES.	PART NO.	QTY.	DESCRIPTION
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE	DRAWN	SR	16JUL99
.XX = ±	DESIGNED	SR	15JUL99
.XXX = ±	CHECKED		
ANGLES = ±	APPROVED		
Invivo Research Inc. PRECISION BIOMEDICAL INSTRUMENTS Subsidiary of Invivo Corporation 12601 RESEARCH PARKWAY., ORLANDO, FL 32826			
TITLE: OPTION KIT: 3153-1 TELEMETRY OPTION 1, 3150 MRI SIEMENS			
CAD SCALE: NONE	SHEET: 1 of 1	DWG. NO.: C97C580	REV.: A